Presented by
Mr. G. J. Thomson.

9.

BY THE SAME AUTHOR

DEGENERATION

Uniform with this Volume

Some Press Opinions

The Times.—"His theory opens the door to a large amount of vigorous criticism upon the fashionable crazes of the day, much of which may be read with amusement, if not with complete conviction."

W. L. COURTNEY in the *Daily Telegraph.*—"Dr. Max Nordau writes with a keen sense of humour, and many evidences of literary skill. He begins with a discussion of the precise characteristics included in the French term *fin de siècle*, tracking through its various disguises all the aberrations of the modern spirit. . . . Dr. Max Nordau is always interesting, always graphic in his descriptions, at once humorous and pathetic, grave and gay, and now and then full of valuable and important *aperçus*. . . . As a powerful antidote to many prevailing modes of thought, his book has a value which it is difficult to over-estimate."

The Daily Chronicle.—"Max Nordau's book, we are told, made a sensation in Germany, and we do not wonder at it, for it is likely to make, if not a sensation, at least a great impression here. It is a powerful, trenchant attack on all the leading literary and artistic idols of the time by a man of great intellectual power, immense range of knowledge, and the possessor of a lucid style rare among German writers, and becoming rarer everywhere, owing to the very influences which Nordau attacks with such unsparing energy. . . . We have purposely confined ourselves to exposition of this remarkable book which is sure to be vehemently attacked, but which cannot be ignored."

The Standard.—"The wit and learning, the literary skill and the scientific method, the righteous indignation, and the ungoverned prejudice displayed in Herr Max Nordau's treatise on 'Degeneration' attracted to it, on its first appearance in Germany, an attention that was partly admiring and partly astonished. . . . The work is one that demands to be studied as a whole, and we are glad to welcome the spirited version published to-day. . . . But let no reader be deterred by the hard words scattered about these pages, nor any searcher after truth imagine that, as in some philosophical works, he will be presented with a vocabulary when he asks for a demonstration. Not only do we find solid information and deep thinking, but we are drawn along by the rhetoric, the passion, and the humour. . . . We may derive unalloyed enjoyment from its graphic vigour and its moral earnestness."

BY THE SAME AUTHOR

CONVENTIONAL LIES OF OUR CIVILIZATION

Uniform with this Volume

Some Press Opinions

The Times.—"This is neither a vulgar nor a scandalous book, and it well deserves to have its objects and its value impartially examined. . . . It is meant to show us what changes should be made in facts, in life, and institutions so that the natural way of speaking and thinking about them may become necessarily veracious, and conventional lying may of itself disappear. The most interesting portions of Dr. Nordau's book are those in which he applies his method to forms of government. The one form of government to which he is tender is hereditary aristocracy. He claims for it two advantages. The first is that, on the whole, men most capable of government are likely to be descended from men accustomed to govern. The second is, that of all kinds of government aristocracy is most likely to bring men into political life while they are still young. But whatever be the professed objects of Dr. Nordau's book, there is no doubt of the model which he has, consciously or unconsciously, followed. His volume is undoubtedly one which Rousseau might have written if he had lived a century later."

The Saturday Review.—"If Dr. Nordau has nothing absolutely new to say against the powers that be, he certainly knocks them about with a vigour and a recklessness that are as amusing as a Punch and Judy show. . . . Dr. Nordau has a deadly eye for the weak points in the system he is attacking ; he states the most unpleasant truths in the most biting style ; he throws his searchlight on the solemn plausibilities of the world with a suddenness that must startle the most wooden-headed conventionalist. . . . We part with him with regret, for he has turned our civilization inside out for us in a very entertaining manner."

The Daily Chronicle.—"One cannot take up Dr. Nordau's work without feeling conscious of being brought into close contact with a mind of exceptional vigour, with an essentially truthful nature, with a master of a powerful style, with a man of varied interests and wide knowledge. We find all these qualities here as we find them in 'Degeneration,' while there is in 'Conventional Lies' the same verve, the same sweeping passion, the same trenchant, biting power ; the same deep insight into real evils that have been widely recognized in 'Degeneration.' . . . The book is a fervid revolutionary protest, in which much powerful political, economic, and social criticism is blended with the declamatory rhetoric of the Secularist and Socialist platforms."

LONDON: WILLIAM HEINEMANN, 21, BEDFORD STREET, W.C.

PARADOXES

PARADOXES

BY

MAX NORDAU

AUTHOR OF

"DEGENERATION," "CONVENTIONAL LIES OF OUR CIVILIZATION," ETC.

TRANSLATED FROM THE FIFTH GERMAN EDITION

By J. R. McILRAITH, M.A.

LONDON
WILLIAM HEINEMANN
1906

First printed, May 1896.
Popular Edition, October 1906.

PREFACE

WHEREFORE "Paradoxes"? Simply because this work deals with the problems discussed therein with the utmost straightforwardness, unbiased by the intimidating decrees of schools and quite heedless of orthodox views. Assertions, which are commonly relied upon as unassailable because no one has ever entered upon the discussion of them, must endure the experience of having the proofs of their authenticity examined, in the course of which ordeal it is discovered only too frequently that they have none. Every-day sayings are forced to undergo a cross-examination as to their truth, and, if they are found unable to stand the test, neither age nor associations will avail to save them from condemnation. The chief aim of the present work is to show that even what seems most self-evident, has nevertheless on its threshold very many difficulties, and may originate great perplexities; for example, its application may give rise, even with reference to the selfsame matter of fact, to the most contradictory theories and explanations, all of which may seem on the surface to be equally plausible and yet really be in all likelihood without a single exception wrong. The author will have accomplished his purpose if he succeeds in prompting his readers to regard all ready-made formulas with distrust, while at the same time paying close attention to all honest contentions. However convincing any demonstration may appear to be, it will nevertheless contain some weak portion, and so, too, however unacceptable an argument may be, it will nevertheless be worthy of patient examination; above all things, however, one should never renounce the right of individual criticism even to please the highest authorities.

The author is quite willing that the principles just mentioned should be applied first and foremost to himself. He does not insist that every one should fall in with his conclusions; he only hopes that they will be regarded with attention. He does not flatter himself that he has unearthed landmarks; his only desire is to induce the reader personally to undertake searches for these. In the struggle to attain to truth the chief thing after all is, not the finding but the seeking. That man has done enough who can claim to have honestly searched.

THE AUTHOR.

May, 1885.

INTRODUCTION

TO THE ENGLISH EDITION

BULOZ, the founder of the *Revue des Deux Mondes*, once said to a contributor, after a quick glance over the "copy" he had submitted to him, "What! An essay on God? No, my young friend. That will never do. God is a subject which lacks actuality."

Now, that shrewd old editor, I venture to think, was not so perspicacious that day as usual. God is a subject which is always actual. So are all subjects touching the great primordial interests of mankind; such as the theory of knowledge; our conceptions of truth and beauty; our views of life and the universe; the powers at work in evolution and history; the laws of human thought; the probable future of our species on earth. These topics are eternal. They have exercised the minds of Pythagoras, Socrates, and Plato. They appeared prodigiously interesting to Berkeley, Locke, J. S. Mill, and Mr. Herbert Spencer. They will seem surprisingly new to our remote descendants. And this gives me the courage to claim that the subjects treated in this book, which deals with these venerable problems, are more actual than that of any pamphlet on some "question of the day," properly so called because there is no question of it the day after.

The fact that in 1895 Mr. Balfour's work *The Foundations of Belief* could be the book of the year, shows that the British public shares my opinion with regard to what is "actual" and what is not. It was eager to listen to a serious thinker entertaining it about matters eternal. This is most gratifying to every author who, without wishing to compare himself with

Mr. Balfour, resembles him at least in the one point that he is treating problems not of passing, but of lasting import.

Bilious critics have sometimes reproached me with not being sufficiently grave in philosophical discussions. It is true: I have done my best to be lively. I have not taken the didactic style of Professor Dry-as-dust as a model. I have had no desire to appear imposing by dignified dulness. If this is a sin, I confess to have committed it. But I err in good company. Was it not John Wesley who said, "Why should the devil have all the fine tunes to himself"?

THE AUTHOR.

March, 1896.

CONTENTS

PARADOXES

I

OPTIMISM OR PESSIMISM?

HAVE not the Pyramids been regarded as one of the wonders of the world? Have not the hanging gardens of Semiramis been also so regarded? Has not the Colossus of Rhodes likewise? And yet I know a wonder of the world greater than these, perhaps the cleverest and most marvellous production of the human intellect in any age—I mean, Pessimism. I refer, of course, to Pessimism properly so called, that Pessimism, namely, which is based upon scientific principles and intended to be of universal application, and which always regards Nature, Humanity, and Life in general as from the point of view of the man who is in such a state of depression as might be caused by indulgence in, say, twenty-four good glasses of liquor.

Two kinds of honest Pessimism ought to be distinguished: namely, the theoretical and the practical varieties. Theoretical Pessimism indulges in an exterminating criticism of all the known phenomena of the universe. Our Cosmos, as it teaches us with the most perfect assurance, is but a wretched piece of work, not a whit better than the abortive first attempt of a bungler. Has its existence any general aim at all? One stands, so to speak, in front of the unwieldy and complicated mechanism, shaking one's head, and seeking in vain to discover any plan or sense in its mad movement. And if the entire universe is but a senseless, designless jumble, can its various

portions be endowed with any reason or order? Surely not. What directs Nature and that in Nature which chiefly interests us in it, namely, human life, is mere chance. There is no such regulating force as morality to guide the current of events, either great or small; the wicked triumph more frequently than do the good; Ahriman throws Ormuzd down the stairs and then calmly laughs if the latter in falling breaks his leg. Why is it then that such a world exists and continues to exist? Would it not be a wiser and more moral act to delegate it back again to that primeval chaos from which we are told it was derived,—a fact, however, which still remains to be proved?

What childish conceit and braggadocio, however, lies at the basis of this style of thought! It starts with the assumption that human consciousness is the highest achievement of Nature, that it has the capacity to comprehend all that is, that without it nothing indeed can exist, and that its laws must also be those of the whole universe. From this point of view alone is this philosophy of the phenomena of the world comprehensible.

For, surely, if Nature is made to be guided by a kind of consciousness, constituted similarly to that of human beings, it becomes an absurdity and open to criticism; for it does not let one know what the object of its existence is; it plays silly tricks; is at one time extravagant, at another niggardly; and as a general rule behaves with such heedlessness of the future, and with such inconsiderate frivolity, that it were high time it were put under the guardianship of some professor of philosophy.

The same thing may be said about the shocking want of principle manifested in the course of the world. If the task were allotted to a properly brought-up, noble-minded gentleman of the nineteenth century, one who can show a good testimonial as to his morality from his native officials, to settle the system of the world, things would certainly be quite differently arranged. In that event we would not be saddened by cases of virtue being pursued by misfortune, nor be shocked by vice and its insolent victories. Now whenever a gentleman of the above-mentioned type feels called upon to create in an

original manner a world after his own ideas, that is to say, to write a novel or a play, he invariably endows it with the most pleasing moral tone, and the dear good audience claps its hands until they become painful, if on the last page or in the fifth act virtue is rewarded with a decoration of merit and vice gets five years' penal servitude, and says to itself—"That is just what should be! Only in real life matters are not arranged quite so well as our noble-minded author makes out." No doubt there are also to be found among literary men odd fellows, who make it a rule in their writings to copy reality in all its nakedness and without the slightest embellishment, and in the works of these persons devoid of power of imagination everything goes, as a matter of fact, quite as seriously as in actual life: Hans fails to win Gretel, although his love for her has been faithful and true, she giving the preference to some scoundrel, who makes her life miserable; talent reaps no fruit, because it fails to find circumstances sufficiently favourable for its proper development; and Mr. President continues to be president, no matter what scandal may have gone the round of the community as to the means by which he got into office. Morality indeed is so bad a business quality that it generally leads to bankruptcy in the end, and the public turns away with disgust from results so cheerless and immoral.

This is a fact then to be taken for granted, namely, that Nature has neither logic nor morality in its composition, and ought either to reform itself or to try to disappear.

But, poor simple wretch! you who adopt this style of argument, upon whose authority is it that you assume your logic to be in any way different from the law which settles the simultaneity and succession of organic processes simply in our own thinking apparatus? Whence derivest thou the right to apply it to the course of events in the universe at large? Is it not possible, nay, is it not in the highest degree even probable, that our human logic has no more control over cosmical phenomena than perhaps has the little hollowed key of our old-fashioned watch power to open the Brahmah lock of a fireproof safe? And yet the forces which rule in our organism and in the universe generally may nevertheless be

identical, in the same way as the mechanical principles are identical upon which the Brahmah lock and the watch are constructed. In the case referred to the whole question at issue is about the difference between something small and something infinitely large, between something comparatively simple and something in the highest degree complicated. There is nothing which expressly contradicts the view that Nature possesses an all-pervading consciousness, whose extent our limited consciousness is quite unable to comprehend. One may thus think of Spinoza's Pantheism or of Schopenhauer's Will; the name you adopt does not much matter. One thing, however, is certain: we see that matter, if grouped together into the shape of a human brain, and energy, when it works in the form of nerve activity, produce a consciousness. The same elements which make up the body and the brain of man, and among which, besides oxygen, hydrogen, nitrogen, and carbon, iron, phosphorus, sulphur, calcium, sodium, potassium, and chlorine are the most important, are also found in enormous quantities outside of the human organism; the forces, which cause the vital processes, in other words, the chemical and mechanical principles, electricity and other forms of energy besides which are unknown to us, are evidently also active outside of the human organism. Who then will be bold enough to maintain that it is only when combined in the shape of a nervous system, and in the shape of a human brain, that these elements and these forces can produce a consciousness? Is it not quite conceivable, nay, even probable, that the shape of the nervous system is merely accidental, and that the really essential parts are the component elements and the forces that work therein, and that these therefore may also do service for a consciousness as a basis, provided that they operate on one another in a manner which is quite different from that which rules the organisms accessible to our observation?

I will even go still farther and say: We don't require at all the hypothesis of a universal consciousness to understand that we have no right to measure events in Cosmos with the meagre yard standard of human logic. Before we can call the course of the world irrational, we must first assume that it

has some object or other, that it is making for some definite goal or other; for, when dealing with a wanderer, about whom we have no knowledge whether his main purpose is to ultimately reach some place or other, or whether the object of his walk is merely to take exercise, we surely cannot say that he is turning down wrong streets, making detours, or not stepping out smartly enough! This preliminary supposition of an aim is, however, quite arbitrary. It is nevertheless conceivable that effect, just as much as cause, is exclusively a phenomenon connected with organic processes, and, in fact, has no existence outside of the organism. Experience has taught us that not a single act of thought or act of will originates in our brain without having been previously led up to by some change in the nervous system, some sense impression; for which reason it is that we are accustomed to presuppose some reason for each of our actions, for each process of our organism, and that even when they do not specially affect our consciousness; and we make this habit of universal application, and extend it even to our judgment of phenomena which take place outside of us. But although our organs require some external stimulant in order to be put into a state of activity, although they will not work without coaxing, although each change in them has as a matter of fact a reason, although they so to speak really stand under the law of causality, it nevertheless does not by any means follow that this law holds good also in the case of matter at such times when the latter is found under conditions which are entirely different from its arrangement in our organism! Let us suppose, for example, a coffee-mill to be a being endowed with consciousness; would it not necessarily imagine a woman's hand to be the indispensable prerequisite to each movement? and even then would not its conception be incomplete unless it were being actually worked by a female hand turning its crooked handle? If now this poor coffee-mill were but to come across some electrodynamic machine, which is set in motion without any human hand being brought near it, surely this phenomenon would seem to it to be manifestly inconceivable and inexplainable, and it would search vainly after the prime cause, which in its case has assumed the invariable shape of a woman's

hand. From its peculiar point of view the coffee-mill can certainly come to no other conclusion than this, that unless a woman's hand is present motion on its part is inconceivable; its experience cannot fail to bring it to this conviction, and so far as the entire order of coffee-mills is concerned, such a conviction would be perfectly just; and yet we know well enough that the coffee-mill would be in error, that the law of its movement has no general application, and that there may be other movements as well which are not produced by a woman's hand, even though a shoal of shallow brains might be inclined to support the arguments of the coffee-mill upon this point. I do not in any way lose sight of the fact that the motion of the electrodynamic machine has of course also some cause, just as much as has the motion of the coffee-mill; I chose the instance merely to show how badly-fitted inferences derived from a particular sequence of facts are to be generalized into laws, which might be equally capable of being applied to different sets of facts. Just as happened to my coffee-mill in regard to cause, so also would it be with a locomotive endowed with consciousness in regard to effect. It would of course be aware that the purpose of its steam is with the aid of the piston to turn wheels. If now the engine should happen to be of an epigrammatic turn of mind, or fond of concise expressions, it might doubtless be expected to say with some self-conceit—"No steam without revolving wheels!" How very much astonished then would this locomotive be, if it were at some time or another to find itself in front of the geyser, and observe there a tremendous outburst of steam which does not drive even the tiniest wheel! Such a sight would appear to it to be absurd; all its theories about the object and effect of steam would be knocked on the head, and I should not be at all surprised if it were, in face of a phenomenon so uncanny and beyond all the general laws of things known to it, to entirely lose its reason. And yet it might possibly be the case that the changes of matter, which take place outside of the organism, might have their existing causes in matter itself and their appropriate objects in themselves, and that therefore we would search in vain if we were to look for an external motive power or a foreign object for

them, which would presuppose a relation to some other combinations of matter. Were this the case, we could no longer justly call Nature contrary to reason, our criticism of its aims or of its want of purpose would be deprived of its foundation, and we would be compelled, in order to comprehend it and appreciate it, and in order to fix upon some motive cause and some object for its phenomena, to stop at the central point from which these phenomena develop themselves.

Even more after the style of the coffee-mill than the accusation of want of purpose is that of the immorality of the world's movements. Judging of the matter by our moral standard this accusation seems to be perfectly just; but upon whose authority is it that we assume the right to rely upon this standard when we desire to study Nature and Life? Our morality is very much controlled by time and place; it has become in a way traditional; it changes its type as does the cut of clothing or the shape of headgear. It is the morality of the white Christian community of the nineteenth century and of no other. Even in the narrow limits, within which at all events it has some theoretical value, it must agree to make many concessions and to accept many contradictions. It censures murder as a crime when it is committed by an individual, and praises it up as something noble and virtuous when some entire armed population practises it wholesale upon some other nation; it terms fraud and lying vices, and yet permits these in matters of diplomacy; a great and well-cultured people, namely, that of the United States of North America, punishes severely robbery and theft when committed by individuals, yet does not consider these crimes as worth noticing if communities, cities, or confederate states make themselves in default in these respects by announcing fraudulent bankruptcies and swindling their creditors. Our morality is at the present day considerably different from what it was in a known past, and it is not unreasonable to suppose that in the future also it will be quite of another order. Speaking generally, it is nothing else than a definition of such conditions, moulded into the form of laws and moral rules, as are considered from time to time necessary, according to the state of our race. As human nature develops, certain

of the conditions of its prosperity become altered, and at the same time the views as to what is moral and what immoral also change. And is it such an uncertain standard of morality that is to be applied to the processes of the world? Is something, which was not regarded by our great-grandfathers as of any value whatever, and which perhaps our grandchildren will not recognize as truth, to be made the immutable law of Nature for ever? An affected dolly, who grumbles because the skies are too uniformly blue, and makes a demand that they should change their colour according to her daily toilette, so as to be in complete harmony with it, would be quite as wise and discreet as the philosopher of the universe who bemoans the immorality and tyranny of its course.

The egoistic or geocentric basis of Aristotle's philosophy has been abandoned by cosmologists ever since the time of Copernicus. It is no longer believed and taught that our earth is the centre of the universe and man the main object of Nature; that the moon has as its mission to illuminate our nights, and the starry host as its to serve as an illustration for our lyric poets. In philosophy, however, many still cling to this childish idea, and accuse Cosmos of being contrary to reason, because the coal supply of the earth will probably in time become exhausted, or because Krakatoa disappeared taking with it so many thousands of human beings in the prime of life; and of being immoral, because the Maid of Orleans was burnt alive, because Gustavus Adolphus fell at the battle of Lützen, and because many loving mothers die in childbed.

If the bacteria of decomposition were only capable of philosophical thought, what a black view they would take of the world! All the world's arrangements, regarded from their point of view, must be cruelly and disgustingly immoral, and must day by day be becoming more so. Brooms and scouring flannels, deadly oxygen and dreadful hot water, conspire together against their existence; anything that might serve to nourish them is removed, destroyed and rendered inaccessible to them by their invisible rulers. The destructive carbolic acid frequently ruins their life, however cosy and pleasant, and converts the frolics of their multitudes into a

dance of death, in which the virtuous bacteria have to take part equally with the vicious. And yet this very thing, which would give them the chance of indulging in a very righteous pessimism, is by us described in thick volumes as a hygienic advance, and celebrated as matter for congratulation!

I can fancy a fly, that may have been endowed with an artistic sense, and that may have found, say, the little bee which forms the coiners' mark upon certain ancient French twenty-franc pieces to be sweetly pretty; my conception has nothing about it so extraordinarily fantastic, for the preference of this insect for pictures and statuary is only too painfully well known to all particular housewives. Well, suppose now such an insect to fly about the Bavaria monument at Munich—how senseless, how illogical, how unshapely must that mass of metal appear to it to be—without beginning or end, now incomprehensively smooth, now strangely rough, with an inexplainable projection here and an out-of-the-way depression there; and should our æsthetical fly be destined to pass its existence in the interior of that great statue, it might well write a book replete with bitter epigrams about its conception of the universe, a book in which the want of purpose and absurdity of its world would be eloquently established, and which would have a very convincing effect upon all its insect fellow-inhabitants of the Bavaria's interior. To a knowledge of the truth, however, it would certainly not have attained, as any fairly accurate strangers' guide to Munich could without much difficulty prove to it.

No, no! Pessimistic philosophy does not admit of any serious treatment. To such extent as it is honest, it appears to be nothing else than a form of profound dissatisfaction with the limited nature of our understanding. One would like to understand the mechanism of the world and yet cannot do so, for which reason we get irritated and censure it, like some artless savage who sulkily throws a musical-box to the ground after having fruitlessly tried to discover the nature of its construction. Man reckons himself to be the lord of creation, yet is compelled gradually to acknowledge that after all his lordship is but of a very limited extent. Consequently he becomes disagreeable, reduces his bad

temper to a system and calls it Pessimism. The child, that stretches out its hand for the moon, and begins to howl because it cannot reach it, is in its own way also a pessimist, though without being aware of it. But its pessimism is readily cured by the present of some barley-sugar.

After all, it is pleasant to find that the formulators of Pessimism as a system know, as a rule, how to value a square meal and good liquor, that after a sentimental courtship in the orthodox fashion they ultimately actually get married, and display a wonderful liking for all that is agreeable in life. Their philosophy is a sort of state dress for grand occasions, and as such sufficiently imposing for the respectful throng of onlookers; and yet we know well enough that beneath the solemn black gown with the cross-bones, the ordinary every-day underclothing is worn, the threadbare yet comfortable flannel vest of jolly Peter and humming Paul.

Besides this definite, theoretical Pessimism, which does not interfere with the utmost jollity in real life, there certainly exists also a practical form, which in popular language is called Leprosy. This form of Pessimism reasons not, neither does it discuss. It has neither regular system nor degrees. It makes not the slightest effort to explain why it is that the world and life in general are displeasing to it; it looks with all sincerity and candour upon everything that exists as unbearable, and as enough to put thoughts of suicide into one's head. A pessimism of this kind cannot be refuted; it can only be analyzed. It is generally a concomitant symptom of disease of the brain, which may perhaps have already reached its culminating point, or again may only as yet be in process of inception. For years before an unfortunate candidate for a lunatic asylum of this type is openly pronounced to be out of his mind, he suffers from melancholia, shuns society, and becomes misanthropical. An organ of thought, which is either imperfectly developed or weakened by processes of destruction going on at its centres, has the dreadful aptitude of foreseeing its own approaching collapse, of tracing out the progress of it, and of knowing that its own breaking-up is included in the operation. The mind looks so constantly at its own decay, and this horrid drama absorbs

its attention so completely, that it retains for all other phenomena only a weak and distracted power of perception. In such a brain as that the world must naturally be reflected pretty much as it would appear to an eye afflicted with cataract, namely, as the tragic night of chaos. All the great poets of the "everything is vexation" type were deranged organisms. Lenau died a madman, Leopardi suffered from certain sexual aberrations which are familiar to the physician for mental diseases, Heine began to get dull and mixed when his spinal complaint began in due course to affect his brain, and Lord Byron had that eccentricity of character which is termed by the laity genius, though ticketed by psychologists under the name of psychosis. This form of Pessimism, which at sight of a loving pair throws up its hands, and on a bright May morning bursts out into tears, with neither cause nor consolation nor end, is a disease, and one too in which no man of sound health will desire to participate.

These are the only types of honest Pessimism which merit any notice on the part of critics. One might perhaps, besides, also note that hypocritical habit of looking at everything in its worst light, which is very much favoured by certain foolish persons, who argue in their own minds that it serves them to good purpose. It is a fine dilettanteism, an intellectual distinction, by means of which one separates himself from the common herd. This hollowness of thought is reckoned by persons of bad taste to be as interesting as hollowness of the cheeks. A man becomes bitter in order to evoke the idea that he has gone through a good deal and has had a remarkable career, and that he has been the hero of extraordinary adventures. He sighs and groans in order to excite the belief that he is a member of the oligarchic and highly aristocratic set who have been initiated into the Eleusinian mysteries of grief. With respect to the characteristics of pessimists of this type, one would only waste his time if he stopped to analyze them. All you can do is to poke him playfully in the ribs, after the French fashion, and say to him—"Naughty joker!"

I have termed Pessimism a wonder of the world beyond all competition, in doing which I have sought to imply that it

embodies a triumph of the imaginative power over actuality, and bears witness to the capacity of man to force Nature back, notwithstanding its most violent resistance, into such disguises as may be cut out for it by his caprice. Just as he causes the crown-like branches of honest trees to adopt in their growth absurd shapes such as of animals and buildings, just as by the aid of pumping machinery he compels water, contrary to its most distinct inclination, to flow up a mountain, so he derives from matters of fact, which the most brilliant thoughts lay before him, a dismal view of the world, and applies his Pessimism even to Nature, which all the time is preaching and proclaiming Optimism with its flower bells and bird voices.

This is indeed what Nature is doing, and, in order to catch its utterance, it is by no means necessary to listen with any special attention, for the sound will penetrate even though one's ears are stuffed with scholastic and pedantic cotton-wool. That inborn instinct which controls the nature of all the thoughts and actions of man, and regulates his whole life, is undoubtedly optimistic. Every endeavour to tear this out by the roots fails, for it is the chief corner-stone of our being, and only ceases to exist when we do.

If one looks very closely into the main grievances stated by Pessimism, it is found that they originate from superfluity of boastful egoism, and are comparable with the anxiety which his wealth entails upon the millionaire. One gets discontented with the apparent purposelessness of the universe, or rather with the incapacity of mankind to discern some purpose for it. And yet, is not this very discontent evidence of the high standard of development to which the human intellect has attained, and are we not rather entitled to congratulate ourselves on what has been attained? Does it not imply health and strength of thought, this addressing oneself to the inquiry into the existence of a chief end for Nature? What an extent of horizon is implied in the mere conceiving of such problems! And how fine must be the prospects to which man has climbed, what intellectual satisfaction and joy he must have repeatedly experienced by the way, before arriving at that lofty standpoint, which being

attained, he in all seriousness fancies himself entitled and able to summon the universe into his presence, and to announce to it with all the authority of an inspector-general—"You must have been framed after some plan; this plan I want to investigate, that I may be in a position to pass my criticism upon it!" Animals are without the feeling of general vexation, and even our ancestor, who was a contemporary of the cave bear, was certainly free from all anxieties on the score of the destiny of the race; for, without a shadow of doubt, so soon as this primitive realist had satisfied himself by eating his fill, he would come to the conclusion that his life had some sufficient reason, and if after that there was still left to him any other desire, one would not be far wrong in judging that it was this, namely, that he might enjoy an undisturbed snooze. With the increase of our visual angle, however, we have become more genteel, and have now ideals quite different from that of a fat bison-steak. But, as is only to be expected, our eagerness after intellectual gain becomes the more ardent in proportion to the capital we have accumulated, and because we have been already so wonderfully successful in extending this, we generally allow ourselves to lose all patience when any bounds are threatened to be set to our course and flight.

What we have just been dealing with is very similar to another complaint of Pessimism, that, namely, about the existence of pain in the world. What shortsightedness! I feel almost inclined to say, what ingratitude! But, my fine pessimist, if pain were to have no existence, it would simply be man's duty to invent it! It is one of the most beneficent and useful arrangements in Nature! If anything, pain implies a healthy and highly-developed nervous system, and it is just such a system that is the *sine quâ non* of all the agreeable sensations which, it is undeniable, are present to life. The lower forms of life are incapable of acute feelings of pain, but we may safely affirm that their feelings of pleasure are also incomparably weaker and duller than ours. Would it not be too extraordinary altogether, were we to be possessed of a constitution sufficiently sensitive to allow of our getting intoxicated with the perfume of a rose, or with a

symphony of Beethoven, or a painting of Leonardo da Vinci, and yet were to be unaffected by the smell accompanying decomposition, the grating noise of a file between the teeth of a saw, or the sight of a cancerous sore? Just inquire of an hysterical patient, who happens to be affected with paralysis of one or both sides, whether she derives joy from her completely painless condition! The outer world is unable to afflict her with pain, yet it cannot impart to her agreeable impressions either, and, after a short experience of this sort of thing, she will impetuously demand that she may again be put into such a state as to feel pain. Dozens of times have I been a witness of the great delight with which a patient suffering from such an attack has greeted the first new sensation of pain induced by the prick of a needle! Pain has the same part to play which the coal-miners' superstition imparts to their guardian angel; it is our monitor, whose duty it is to point out to us the presence of dangers, and encourage us to grapple with them or elude them. It is therefore to be considered our best friend, the guardian of our life and the source of our strongest pleasurable sensations. For pain it is that induces us to make an effort to struggle against what produces it, which effort is accompanied by the severest test of our faculties, and affords that unparalleled satisfaction which is always associated with the practical manifestation of our individuality. Without pain our life could scarce endure a moment, for then we would never become acquainted with the pernicious elements, nor would we know how to protect ourselves from them. A world reformer of the higher order may perhaps be tempted to remark that it might quite well be conceived that the sensation of pain could be supplanted by intuition; but surely there is no necessity for our being kept in mind by suffering to take up a position of defence against threatened disturbances; a painless, intuitive knowledge of what is injurious to us would render us the same service. To which the following reply might be made: either this knowledge would not be powerful enough to rouse us and spur us on to a special effort, in which case we would either pay no attention at all to its admonition, or do so to an insufficient degree, and so get

easily vanquished by the enemies of our existence, or else its warning note would be so sharp and penetrating that we could not help responding to it by an extreme effort of our will, in which case again we should simply feel it as if it also were pain, just in the same way as at present we do the monitory processes of our nerves of sensation.

What pain is in the case of the physical organism, discontent is in the case of intellectual life. If it presents itself with sufficient violence to be felt as suffering, it becomes an incentive to alter and to make better the circumstances which originate it, and that with the exertion of all our strength. It would never fall to the lot of a happy individual to regard his surroundings with glances showing a desire to destroy; without compulsion being brought to bear upon him, even a Hercules does not complete his twelve labours, and that though these may not cost him anything in particular; and before a man sets about making his bed over again he must first have felt uncomfortable in it. Discontent is therefore the cause of all progress, and the man who laments its presence in our intellectual life as if it were an affliction ought at once to have the courage to acknowledge as an ideal of his the condemnation of mankind to an unchanging, life-long, Chinese sort of existence.

Although discontent with the existing circumstances amid which an individual or a whole people is forced to live, ought never to be made use of as an argument in support of Pessimism, it is on the contrary an additional evidence of the fact that an indestructible Optimism lies at the basis of our thought. Every criticism is only the result of a comparison that has been instituted in the mind between the real conditions and those ideal ones which have been built up by us in the world of our imagination, and which are regarded by us as perfect; and yet the very fact, that one can formulate such a criticism with more or less clearness, lies at the root of the silent thought that the circumstances which impressed one as being objectionable or unendurable are capable of being changed for the better; and surely this thought cannot but be called an optimistic one! Yes, and what is more, by the very act of grumbling about something

which exists, by the very act of distinctly thinking or indistinctly anticipating that it could, and in what way it could, be made better, one has already carried out the improvement in his heart, the transformation has already been accomplished in the sphere of the imagination of the discontented individual, and has for him at all events that degree of actuality which is, as a general rule, the peculiarity of all the phenomena of our consciousness, that, namely, which implies as well the perception of the external world communicated by the sensory nerves as it does the formation of an improved ideal world based upon some combined activity of the brain cells. Every one who is discontented is therefore in spirit a reformer, a creator of a new world, which is present in his head, and which includes all the conditions of human happiness ; and if he is well versed in the analysis of his own sensations, he will without much trouble learn that his dissatisfaction with things in general leads to a great self-satisfaction, and that the pleasure which the ideal world of his own creation affords him, at least counterbalances the displeasure which the real world occasions in him. And here I shall venture to give my argument a personal turn, and shall inquire of the straightforward philosopher of Pessimism whether he is not thoroughly pleased with himself if he proves successful in representing in a really convincing manner the wickedness and senselessness of the world and of life? In all probability he will jump from his writing-table, and in his delight run to embrace his wife, if some page of his essay turns out black of a specially deep hue ; or should he have completed his work, he will read out a chapter of it to his friends at the club, and experience while doing so such internal satisfaction as of itself would suffice in his view to make life well worth living.

Our bitterness then at our failure to understand the mechanism of the world or the aim of the world is but evidence of the high development of our thinking faculties, in consequence of which we experience a constant feeling of satisfaction and delight, our bodily pain but a sign of the healthy state and active capability of our nervous system to

which we owe all the agreeable sensations of our existence, and our discontent but the motive of a creative activity of our imagination which becomes for us a source of deep-seated gratification. How there can be room for Pessimism here I cannot at all see.

I trust that no one will so completely misunderstand my arguments as to take me to be a disciple of the sage Pangloss. I am anything but a follower of the doctrine laid down by that philosopher of content, and by no means hold the view that this world is the best of all possible worlds. What I do maintain is something quite different. I say, this world may be the best or it may be the worst of all possible worlds, or again, it may be of an intermediate degree between these extremes, but mankind at all events ever and aye regards it as an endurable world; man has the wonderful faculty not only of accepting, with a sort of morose toleration, the natural circumstances which he has absolutely no power to vary, but also of becoming on terms of intimacy with them, of finding them in themselves comprehensible and agreeable, and of becoming so attached to them that he ceases to entertain the slightest desire to exchange them for others even though he might imagine better ones. Now this is rendered possible simply because the web, which is the basis of his being, and upon which is worked by experience all sorts of melancholy designs, is purely and simply Optimism.

Need I adduce illustrative examples to make these assertions clearer? There are such close at hand. Even the professed pessimist admits the beauty of Nature, and takes pleasure in a summer's day when the sun casts its shining rays upon us from the cloudless blue of the skies, or in a balmy night in June when the full moon is shining surrounded by ten thousand twinkling stars. And yet, on the other hand, an inhabitant of Venus, if suddenly transplanted to our earth, would probably fancy himself to be in a desolate wilderness replete with cold and darkness. Accustomed as he had been to the dazzling brightness and the furnace-like heat of his native planet, he would doubtless feel icy cold in our tropical noon-day, and would find our most brilliant colours dim and ashen, our brightest lights pale and dull.

In the same way, how sluggish, how dead would the aspect of our sky with its solitary moon necessarily appear to an inhabitant of Saturn, to one who is accustomed to the inconceivably rich kaleidoscopic display of eight moons and two, if not more, rings, which, with their rising and setting, their constantly changing relative positions, and their intricate motions, bring within the scope of his view a wealth of variety of which we are utterly unable to form any conception. And yet we certainly have no great longing for the splendid sun of Venus, or the bewildering quadrille of Saturn's moons, and are quite as contented with and thankful for our present humble astronomical surroundings as if we really had been sitting at the feet of Pangloss. But why need we adduce the inhabitants of our fellow-planets in the solar system? There is no necessity at all to make flights out into space in order to demonstrate the general optimism of the human race. Let us simply look towards the polar regions. Human beings are living there, whose cheerfulness has been subject for remark by all explorers. They cannot picture in their minds anything more glorious than their ice-bound habitations and their eternal night, and, if they had poets among them, they would doubtless in their verses celebrate and praise the terrible snowy wastes of Greenland with pretty much the same emphasis as our writers have used with respect to a landscape on the Rhine, with its vine-clad slopes and fields of waving grain and dark forests in the background. This reflection opens up for us, it may here be remarked, a more comfortable anticipation of that future ice period which the earth is approaching, if, that is, the cooling theory is to any extent correct. When we picture this future in our minds we generally think of the last men as being enveloped in sealskins, crouching over a wretched fire made from the last remaining coals, holding their thin hands shiveringly over the scanty glow, and looking sad, sad as a consumptive orang-outang in the Berlin Zoological Gardens. This picture is certainly an erroneous one. Taking the life of the Eskimo as a standard whereby to judge that of our descendants of the glacial era, I am convinced that the latter will be the jolliest comrades in the world. They will form carnival

societies, hold daily fairs upon the ice, keep the cold out of their limbs by means of unwearied dancing, enjoy their fish-oil to the tune of noisy drinking songs, and consider their lot a splendid one. And when, finally, the last man comes to be frozen up, he will probably die with a broad grin upon his face, and the most recent number of the comic periodical of the day in his rigid hands.

No doubt the poet assures us that life is not the highest good, and yet we think and feel as if it really were so. The thought of the cessation of our consciousness, the annihilation of our personality, is a terrible one; death, even when it is not our own, but say that of our parents, children, or others whom we love, awakens in us the bitterest pangs which we are capable of feeling, and there is no more precious boon which we can wish for ourselves and our friends than that of a long life. Now, what is meant by a long life? A hundred, or a hundred and twenty years, these are the highest totals; more than that nobody thinks of desiring. A centenarian feels that he is an object of envy, while on the other hand the fate of the young man is lamented who is doomed to die at the age of twenty or five-and-twenty years. Accordingly, all these ideas which spring up so readily in our minds, and which we never oppose or criticize, are but the overflow of our indestructible Optimism. We are satisfied with a hundred years or less, because we very seldom come across an instance of this limit being overstepped. If the average duration of human life were to be two hundred or three hundred years, as apparently is the case with the raven, the carp, and the elephant, one would want to live to the age of two hundred or three hundred years as the case might be, and would feel aggrieved if he were informed that he was fated to die at the earlier age of one hundred and fifty years, although as things are he certainly never wishes for more than one hundred years. Inversely, were the human organism adapted for a life of only thirty or thirty-five years' duration at most, as is the case, for instance, with that of the horse, then nobody would cherish the wish to live to an older age than thirty or five-and-thirty years, and we should consider an individual who died at that age as fortunate in proportion

as under present circumstances he is considered to be an object of pity. Moreover, if only an instance—one would be sufficient—were known of a human being escaping the inexorable hand of death, people would never want to die at all, and every one would hope, wish for, and dream that this phenomenon, though only thus once observed, might be repeated in his own person; the great majority of mankind would then think of death in pretty much the same way as they at the present day think of a Chinese execution by the process of sawing in two between two planks, namely, as a terrible and exceptional fate which not infrequently befalls individuals, but which they strive to shirk by every means in their power. Since, however, no case is ever heard of a man escaping the clutches of death, each of us tries to become reconciled to the idea of having to die, and that without any special difficulty, and without even any special grief, and contents himself with hoping that this event may be deferred to a very advanced period. Would it not be possible for man to live to the age of some hundreds, some thousands of years? We are acquainted with no real reason why this might not be. Be this as it may, we have no desire for it simply because it is not the rule. Is it after all absolutely necessary that death should put an end to our individual existence? We are unable to see any such necessity, notwithstanding the efforts of Weismann and Götte to prove that it is an arrangement conformable to the best interests of the race. And yet one gets reconciled to the terrible fact of death simply because we recognize it as being unavoidable. We are indeed so happily organized that we accept what is really, what is absolutely unavoidable with a light heart, and cease to trouble ourselves with dismal thoughts about it. This explains among other matters also the possibility of what may be called the "gaiety of the gallows," that cheerful disposition which is characteristic of wretched criminals who are being led away to the place of execution. Its occurrence cannot be doubted, for it has been noticed by perfectly reliable witnesses. The candidate for death manages to reconcile himself even to the rope, so soon as he becomes imbued with the conviction that it is inevitable.

If, on the other hand, there should remain but the slightest, the remotest possibility of any state of circumstances being changed, of any evil being averted, or of some favourable event falling to their lot, how triumphantly and irrepressibly does the inborn optimism of mankind again burst forth! A possibility, which is so minute that no man who is in full possession of his wits would stake his money upon it, which may be so minute as to be quite beyond calculation by the theory of probability, is nevertheless sufficient to serve him as a foundation for the most imposing castles in the air, and works him up to a state of expectancy which comes near to felicity. The following may be taken as an extreme illustration of this optimistic tendency of mankind. A lottery was instituted in France, the chief attraction of which was a prize of 500,000 francs. Fourteen millions of tickets were issued, of all which only one could be a successful one. Each purchaser of a ticket consequently acquired the fourteen-millionth part of a probability that the ticket falling to his lot was the lucky one. To show the true value of this fraction, I will adduce an analogy. There are in Europe about 100,000 millionaires, and probably more than 500,000 persons who possess half-a-million each. Let us leave the half-millioners out of account, and merely take the 100,000 millionaires into consideration as a basis for our calculation. Now, we may assume that out of every ten millionaires one is childless, without near relations, or at enmity with his family, and is disposed to name as his universal legatory some person whose acquaintance he has chanced to make and who pleases him. At the present day there are altogether in Europe about 320,000,000 of inhabitants. It follows consequently that for every 32,000 Europeans there is one millionaire who is only waiting for an opportunity to bequeath his million or millions to one of these 32,000. In reality the proportion is even more favourable in the case of a German or an Englishman, because in Germany and England the number of millionaires is larger than it is, for example, in Russia and Italy. The probability that any one of us without buying a ticket will become heir to some millionaire amounts therefore to at least one thirty-two-thousandth, and is consequently four hundred and thirty-

seven times as great as the other one, namely, that the holder of a ticket in the *Loterie des Arts* would win the chief prize of 500,000 francs ; and if we are willing to limit our desires to the half-millions, the probability that such a sum will be bestowed upon us as a legacy by some entirely unknown benefactor, one not even related to us so closely as our "uncle from America," is as much as two thousand five hundred times greater than the chance of winning of the purchaser of such a lottery-ticket. Nevertheless, there is no one among us who would probably expect such a million or half-million, and certainly there is no one who would count upon getting it. It comes to this, then, that in a single country there have been found 14,000,000 persons who would pay a franc for the one fourteen-millionth chance of winning the prize, and build thereon the most serious expectations, although they were four hundred and thirty-seven or two thousand five hundred times less justified in doing so than any one of us who pay not so much even as a cent for our chance of falling heir to a fortune. I can't help thinking that instead of endeavouring to contradict professional pessimists by adducing reasons, these gentlemen ought to have sent to their houses tickets in the *Loterie des Arts* as a sort of crushing argument wherewith to close the discussion.

Let us now examine the other side of the picture. Every one among us does things which expose him to the risk of death with a probability which, as a matter of fact, exceeds one fourteen-millionth. On the railways of Europe, for example, in each year one traveller out of less than 14,000,000 meets with an accidental death. Is there now any one sufficiently pessimistic on that account to abandon the use of the railway? A possibility of one fourteen-millionth is evidently insufficient to make us nervous ; yet it is sufficient to awaken hopes in our hearts. To an influence of disagreeable ideas so feeble our intelligence is insensible ; yet to the influence of agreeable ideas, an influence no stronger than the other, it is susceptible. How is this? Simply because by virtue of its very nature it has an optimistic and not a pessimistic tendency.

This is a feature which we notice alike in the greatest as in the smallest matters. Which of us would ever select a profession, unless we were obstinate optimists? In every career those who attain to the front rank are the rare exceptions. Only one out of fifty men who get promoted becomes a general; only one out of one hundred physicians becomes a University professor; the remainder are left in inglorious obscurity, frequently in poverty, and are compelled down to the end of their days to struggle against all the unpleasant accompaniments of their profession, without ever experiencing a single one of its more enjoyable or remunerative features. Nevertheless, when we approach the problem of choosing a profession, we look only to the exceptional case out of the fifty, or the one hundred, and not to the forty-nine or ninety-nine, and entertain the firm conviction that we shall become like this exceptional case, and that though in the view of any sober-minded calculator such a result is in the highest degree improbable. With every enterprise that we undertake, pretty much the same thing holds good. Failure is as a rule quite as possible as is success, perhaps more so. Yet we never hesitate to engage in what we have in hand, and this we do naturally, simply because we have faith in its ultimate result. That which finally decides one, that which counteracts in your mind the figures of the calculation of probabilities, that which draws the curtains over the windows wherefrom the probably disastrous nature of the event might be viewed, and hangs on the wall the picture of the far less probably successful result,—that is Optimism.

Be it well understood, this holds good only of ourselves and our own affairs. If, on the other hand, we are engaged in advising some other person upon the subject of the choice of a profession, or in judging of the prospects of another's enterprise, then we never fail to study closely the various obstacles and probabilities of failure, and almost always incline to pessimistic predictions. How is this? Simply because in these cases the purely subjective element of Optimism does not lead our cold-blooded calculations astray, or influence our estimates. The various difficulties are

clearly perceived by us, but not so the energy, which has the purpose and consequently the hope also of surmounting them. This energy is only felt by the possessor who is applying himself to some undertaking or other, and by him therefore its result is judged in quite a different way than it is by the spectator, who looks at things in profile, and does not realize how broad is the front of attack which self-confidence and consciousness of one's own vital energy creates.

It is a very amusing circumstance, that even the worst sceptics possess this subjective optimism, and on all sorts of occasions display it, frequently quite unconsciously. Persons who regard themselves as irreclaimable takers of the gloomy view of things, still feel a veneration for old age and a sympathy of childhood. The grey-haired man arouses in them the idea of wisdom and experience, the suckling child that of a development full of promise. And yet the child during its early days is nothing else but an unreasoning little animal that dirties itself, squalls, and annoys those who happen to be near it; while the grey-haired man, from the point of view of an unprejudiced observer, is physically an unattractive picture of decay, in disposition a blind inexorable selfishness, which has not even the ability to become interested in anything else beyond itself, and spiritually an enfeebled and narrow intellect, the chief contents of which are exploded fallacies and prejudices, and which is closed to all advanced ideas. Why is it, then, that we nevertheless regard old age with veneration and pious care, and childhood with tenderness? Simply because we are so fortunate as to be able to create illusions for ourselves, and because the close of a life just as much as the beginning of a life, a last chapter just as much as a first, affords us the opportunity of composing the missing novel from our own materials in the most charming and edifying manner possible. To the old man we allot the past, to the child the future of an ideal individual, and that although the chances may be one hundred to one that the venerable-looking, grey-haired man was in the period of his youth and manhood but a commonplace simpleton, and in respect of accomplishments and bad qualities but

an everyday sort of character, deserving of no attention at all; or that the child which is the subject of such interest will become an unmitigated noodle in character, a niggardly grocer by occupation, will tell lies, do mean tricks, and slander his neighbours, just as nine-tenths of the people do who swarm around us, and who inspire us with neither respect nor sympathy. We have space for disagreeable facts only at such times as we chance to run our noses against them, and not always even then; when, however, as in the case of the grey-haired man or the child, we have it in our option, in the absence of any certain knowledge concerning the past or the future, to represent the one or the other to ourselves as beautiful or repulsive,—in that case, we do not hesitate an instant, but improvise for ourselves out of the grey-haired man and the child glorious visions of demi-gods, which are in reality nothing else than exaggerated illustrations of the optimism which is so deeply seated in us.

Sagas and fairy tales, which are the plastic clothing of the views held by the uncultured classes about the universe, prove a hundred times over the irrepressible elementary optimism of every people. I have already made mention of the unconcern with which every individual reconciles himself to the horrible fact of death. A people goes farther: it will actually make a virtue out of necessity, and will devise a story to give expression to the thought that death is a boon and that everlasting life would be a dreadful calamity. This, in truth, is evidently the moral of the legend of the wandering Jew, who is made, in his utter desperation, to long for death as a deliverance without ever being able to find it. Does not a people who can invent a legend like this resemble the fox in the fable, which with the utmost assurance pronounces as sour the grapes which he eagerly desires but cannot reach? Immortality is a thing which cannot be obtained, for which reason it is a tragical evil; so judging, we can take comfort, and the fiddler may lead off the dance. Or again, take the beautiful tale about the poor man whose cross weighed so heavily upon him and who prayed for another one! His guardian angel led him to a place where lay many crosses, large ones and small ones, heavy ones and

light ones, sharp-edged ones and rounded ones; he tried them all in their turn but none quite suited him. At last he came across one to which he seemed better adapted than to any of the others, when, lo and behold! it was his own, the same that he had desired nevertheless to exchange! Or, still again, take the comical story about the three wishes, in which a wretchedly poor old couple, to whom a spirit granted the fulfilment of their three dearest desires, were not clever enough to knock more out of this stroke of luck than a paltry sausage! Under various shapes and forms again, in the same class of sources, is the conception invariably repeated, that every person finds himself most at ease in his own circumstances, that he would do wrong to wish for any other state than that in which he happened to be, and that the hump of the hunchback makes the latter's cup of happiness quite as brimful as his fine figure does in the case of the trooper of the Horse Guards.

The truth is that Optimism, a boundless, ineradicable Optimism, forms the basis of all human ideas, the intuitive sentiment which is natural to him under all circumstances. What we denote by the term Optimism is simply the form under which our own vital power, the vital process of our organism, is brought within the scope of our consciousness. Optimism is consequently merely another expression for vitality, an intensification of the fact of existence. We feel our vital activity in every cell of our *ego,* or personality, a fertile activity which is prepared for unceasing toil, and therefore also serves to forewarn us of it; hence also we believe in a future existence because we feel it in the depths of our being, and hope because we have the consciousness that we shall still endure. It is only when this consciousness fades away along with our vital power itself, that hope also grows dim and vanishes, and the light-ports of the future become closed; but by that time also the eye has failed, and is unable any longer to fully understand the unpleasant change. The capacity of the organism to adapt itself to circumstances, a capacity without which the organism cannot indeed exist, and the desire for improvement which resides in it, and incites it to run through a predestined cycle of develop-

ment, these form the vital foundations of that optimism which we have learned to recognize, not only in the spirit of contentedness with what has been allotted to us, but also in the habit of looking ahead with the utmost expectation. Valiant struggles after the highest ideal of development, triumphant self-assertion against hostile influences, motion, progress, hope, life, all these are but synonyms of the term Optimism. The ancient Roman who composed the motto, *dum spiro, spero*, "as long as I breathe, I hope," has summed up very shortly the whole philosophy of the vital process, and given to a fundamental biological truth the form of a classical pun.

II

MAJORITY AND MINORITY

TO every superior mind the Philistine is a regular bogey-man. Any one who can find but the slightest trace of genius in his composition, even though it should be barely sufficient to entitle him to wear his hair long or to denounce the prejudice in favour of top-hats, will not hesitate to exercise the muscles of his arms in punching away at the head of the Philistine,—of course I mean only figuratively, for the Philistine as a rule keeps a flunky, if, that is, he does not happen to be one himself. This state of hostility indicates base ingratitude. The Philistine is a useful member of society, and possesses even that degree of relative beauty which is the characteristic of everything that is perfectly adapted for its purpose. He is the perspective background in the painting of civilization, without the artistic smallness of which the full-sized figures of the foreground would fail to produce the impression of size. That is his æsthetic *rôle*, but it is not by any means the most important *rôle* which he is authorized to play. When admiring the Pyramids,—I can't make out why the Pyramids should come again so soon into my mind; possibly it may simply be because they are specially adapted by reason of their shape for being made fixed points in mental calculations,—when admiring the Pyramids, then, does not a spectator say to himself that he owes these to the much misjudged Philistine? In all probability it was some talented public engineer of the first rank among the ancient Egyptians that designed them; but the actual building of them—that was the work of the children of Israel, notwithstanding the fact that these must have been very ordinary creatures indeed, if one is justified in forming

any conclusion about their general character from such data as their acknowledged taste for onions and flesh-pots. Of what service to us are all the conceptions of a genius? They exist only in his own brain and for himself, having no existence for us at all so long as the uninteresting Philistine in his cotton nightcap fails to put in an appearance and manufacture them strenuously into a reality—that Philistine who does not detract from his officious attentions by exercising any inventive activity of his own, but awaits with an inviting empty-headedness the impulses, suggestions, and orders of his superiors. The man who is able to do original work, as a general rule and justly, considers himself to be superior to the mere translator. It is the business of the exceptional genius to think out and to will performance; the business of the mediocre multitude to transform the thought and the will into outward visible shape. What else is it that we cast in the teeth of the Philistine? That he does not readily give way before the assaults of the man of genius? Why, that is just what is wanted; it is just on this account that he should be specially blessed. His weight, his stable equilibrium, that cannot be easily disturbed, make of him a kind of gymnastic apparatus, a sort of heavy weight to be thrown, or a dumb-bell, by the use of which the higher nature is able both to test its strength and also to develop it. No doubt it is a difficult thing to move the Philistine's sluggish mass to activity. It is, however, for the man of genius a beneficial course of training thus to keep trying until he attains success. If any new idea fails to prevail upon the Philistine, it evidently demonstrates that it is not strong enough, that it is not, or is not as yet, of any value; whereas, if, on the contrary, any conception operates upon the Philistine, it may be considered as having satisfied the main and most important test of its excellence. With his intellect, of course, he is quite incapable of examining and passing judgment upon the ideas of the elect; but on account of his *vis inertiæ* (power of inertness) he becomes a contrivance, which unconsciously, yet on that account all the more surely, separates the perfectly developed and vitally active ideas from those that are immature and worthless.

It would be a perfectly comprehensible circumstance, if the Philistines were to complain of or divert themselves over one another, if one Philistine were to cast this very nickname with the utmost contempt at the head of another, just as a black man when in a rage takes upon him to style another a nigger. For, as a matter of fact, one Philistine is never able to get on with another; he cannot expect of him either incitement or entertainment; the one sees in the dull face of the other the reflection of his own narrow-mindedness; the one yawns at the tedious seeming recital of the other; and if two of them happen to be together they are mutually shocked at the terrible emptiness of their minds, and get that depressing and dispiriting consciousness of helplessness which the man who has been accustomed to being led feels when his guide leaves him in the lurch. But the man of talent ought to glorify the Philistine. The latter is his fortune, the arable land upon which he subsists. Certainly it takes a lot of trouble to look after, but then how fertile it is! A man has to work hard in order to make it productive; he has to spend the whole day from early morn until late at night making furrows, subsoil ploughing, chopping, breaking, turning, raking, scattering, covering over, cutting; he has to perspire and feel chilled; but the harvest will never fail him provided the seed had the power of germinating. Of course, if a man sows rotten grain or small stones he cannot hope for any produce. One might as well perhaps entrust date-stones to the shores of the "Curische Haff." Should, however, the land remain inert, notwithstanding all this husbandry, that result would not be the fault of the land, but of the dreamer who carried out the experiment. Judgment must come to the assistance of the man of genius in order to point out to him the proper place and the proper time for the publication of his thoughts. It is only so long as he knows how to choose his time and place with tact, that he will find the Philistines in general always ready to reward the sowing with the harvest. As often, therefore, as men of genius are assembled around a table in brotherly communion, their first toast ought in all justice and propriety to be the Philistine.

What indeed is the chief cause of complaint which people

claim to have against the Philistine? Why, that one does not require to search in order to find him; that he exists in tremendous crowds; that he is the rule and not the exception. Should one desire to leave out of account for once the numerical proportion in which he is distributed, and study him apart by himself, then one would have to acknowledge, that is if he is fair-minded, that the Philistine is a thoroughly smart fellow after all. He is, generally speaking, better-looking than even an extra handsome baboon, although at the same time he is not quite up to the standard of the Apollo Belvedere, which, by the way, would also be commonplace if it represented the average type of the human race; he is far more dexterous than even a trained poodle, although at the same time he may not be good enough for a circus clown, whom in the same way one might reckon as awkward if every country yokel were able to stand on his head and turn somersaults in the air, just as easily as he now shuffles himself forward in excellent fashion on his two legs, or to pin flies to the walls with a rapier just as easily as he now builds up sheaves with a pitch-fork; he is, too, frequently a good bit cleverer than an oyster, nay, even than the sagacious elephant, although at the same time he may not think so profoundly or so closely as Darwin, whose penetration will perhaps nevertheless be valued by the philosophers of the future at no greater price than that which we assign to the physiological theories of Parmenides or Aristotle. Whoever uses the term Philistine implies thereby simply majority, and whoever does despite to the latter offers opposition to the theoretical principle which lies at the basis of all political and social institutions.

No doubt there are to be found many persons who will commit this last-mentioned mistake without the slightest compunction, and will actually even feign or sincerely feel a preference for it. I hate the common herd, and keep it at a distance from me, they repeat after Horace; they declare expressly that they belong to a minority, and find in this matter for pride; they maintain that they feel differently, that they think and judge differently from the mob, that is to say, adopting a less despicable style of expression, the majority, and there is nothing which would seem to them more offensive

than that one should speak of them as commonplace, by which expression, however, one may have meant to convey simply this, that they seemed to resemble the majority.

We shall shortly have to turn our attention to the inquiry whence this dislike of the majority arises, and whether it can be justified; but let us first of all consider whether these excellent persons, who take such precautions to prevent their being reckoned as part of the crowd themselves, think and act with consistency. Supposing them to be logical, they would have to make the points which distinguish them as a class manifest by their whole walk and conversation, and by bringing their special characteristics into prominence seek to prevent any risk of being confounded with the majority; they would have to bring a different style of dress into the light of day, assume other customs, manners, and moral principles, and invariably disregard the verdicts of the majority. Do they act thus? No; they really act in a directly different way from all this. It seems to them to be in accordance with the principles of taste not to openly give offence, and consequently they do not outwardly distinguish themselves from the despised mob; they fall down before the opinion of the public, and feel aggrieved at it when they learn that it is opposed to their way of thinking; they are the most powerful mainstays of the law, which all the same is nothing else than an abridged statement of the opinions of the populace, that is to say, of the majority, in the form of commands; they defend parliamentarism, which, as a system, depends on the recognition of the right of the majority to force its will upon the minority, and in many instances they become enthusiastic in favour of universal suffrage, which notwithstanding is the very apotheosis of what is commonplace. I am not forgetful of the fact that one frequently floats with the stream, not because one really has the purpose to reach the point to which it takes one, but because one has not strength enough to struggle against it. The man who originally composed the proverb that when one is among wolves he must howl like a wolf, must have intended to express thereby a hard necessity, and not any special respect for the wolves as such. But there is another proverb which declares that the voice of the popu-

lace is the voice of God, so placing the Philistines right on the summit of Olympus. And there is also this other fact, that even in the case of those who affect to despise the mob the most important acts of omission and commission are characterized by a regard for this tacit hypothesis, that the opinions of the frequenters of the market-place are in their main features correct and worthy of respect.

Some few individuals, so few that they may be counted upon the fingers of one hand, have, it is true, had the courage to be logical. Treitschke commends an enlightened despotism, that summary system of government which deems the majority of no account, and which claims the right for a minority which has become reduced to one to think and decide for an entire people. Carlyle upholds hero-worship, and insists upon the unconditional subordination of the masses to a single powerful individual. Montesquieu makes this jest, that trial by jury should be regarded as an acceptable system only under one condition, namely, when the opinion of the minority and not that of the majority is taken as the verdict, for among the twelve sworn in there are sure to be more blockheads than sensible individuals, and therefore the judgment of the minority may be expected to be the judgment of the sensible, whereas that of the majority would only be that of the blockheads. That is indeed a very severe way of expressing the idea that intuition is only the inheritance of the few, while the masses are simple and narrow-minded. Montesquieu overlooks this fact, however, that the minority, in so far as it includes within itself all that differ from the average, consists not only of those who rise above the ordinary standard, but also of those who lag behind in an inferior degree, and consequently men of genius side by side with noodles, and the healthy individuality side by side with the diseased abnormal kind. The members of the Academy form but a very small minority in proportion to the entire people, but the same thing might be said of the inmates of the Public Lunatic Asylum, so that Montesquieu runs the risk of seeming to wish one student and two idiots to triumph over nine average Schulzes or Müllers, a result which would be absurd as Euclid would say. I have, how-

ever, also a suspicion, that Carlyle and Treitschke do not really despise the majority so much as they pretend to do, and as they probably themselves imagine they do. Enlightened despotism! Hero-worship! Hm! Let us just examine these terms. Does not the phrase "enlightened despotism" simply mean that some genius is to have the chief power, and compel the masses to agree to his views and intentions, adopt his opinions, become of one accord with him, and thus establish at last perfect harmony between them and him? And "hero-worship," is not this simply the desire to see the hero, or, in other words, the exceptional phenomenon, esteemed, honoured, and recognized by his god-parents Hinz and Kunz? For my part, this seems merely to imply a constant inclination towards the mob, which is quite incapable of being ranked along with the pretended contempt for it. Why should the scorner of the Philistine attach so much importance to the opinions of the mob? What advantage will he gain by its appreciation and admiration of him? If Treitschke's views are adopted, it would immediately follow that a Frederick the Great or a Joseph the Second ought, properly speaking, to abdicate and hand over his crown to some honest mediocrity among his relations, since he is above surrendering to the rabble; he cannot take any rational interest in the conversion of blockheads to his enlightened ideas, and his pearls are not to be cast before swine. According to Carlyle's view, it would be a personal degradation for a Michael Angelo to exhibit his 'Moses' to the purblind gazers about the streets, or for a Goethe to allow his *Faust* to be printed for the use of more advanced girl students; the applause of the human herd, instead of being sought after by them, ought on the contrary to make them nervous, and they ought properly to exclaim with that really consistent orator—"They are applauding—have I been talking some stupidity?" Let a Frederick the Great then seclude himself in the grounds of one of his palaces, and cease to have any converse with the common people; let a Goethe convey himself away to some desert island, and recite his verses to his own ears, alone, and —long live Logic!

There is in all this a contradiction which cannot be gainsaid. On the one hand, it is affirmed that the mob should be despised, while on the other hand every act that is done is so done with it in view; the mob is denied the ability to pass judgments upon the productions of genius, and yet the fairest dream of the man of genius is fame and immortality, in other words, recognition by the mob. Intuition among the mob is denied, and parliamentarism, trial by jury or by benches of judges, public opinion, institutions, all of which are held in the highest estimation, are nevertheless all founded on the assumption that the majority is not only positively wise, but also perfectly infallible. It is regarded as an insult to be counted among the mob, and yet on all great occasions one takes pride in feeling and thinking just as the mob does. When he wished to make a great flourish, the ancient Roman could find nothing nobler to say than—"I am a man; nothing that relates to man will be considered by me foreign;" and he would probably be much astonished if some cynical debater among his contemporaries were to retort—"You say that you are a man of the same kind as other men; do you take pride then in being common?"

Be this as it may, I think I have it in my power to explain this contradiction. It appears to me with a clearness that is convincing, that this phenomenon has a biological cause. The unknown energy, which arranges matter into the form of living creatures, produces at first not species but merely individuals. I shall not in this place discuss the various theories of the origin of life, and shall equally omit the inquiry whether the commonly accepted view is correct, according to which living protoplasm was at some given time or another evolved out of lifeless matter, or whether what Preyer thinks is the case, namely, that life has from all eternity been just as much an attribute of matter as movement and attraction. So far as the creation of the living creatures, which are produced by matter at the present day, is concerned, it will be sufficient to take the impulse instilled into other living creatures, which have preceded these, and from which these are descended. Life is, in its ultimate analysis, merely the building up or the breaking down of

certain albuminous compounds of nitrogen under the influence of oxygen ; this is a process which can be completed under the most varied forms, and whenever Nature takes upon it (it is purely for the sake of convenience that I express myself thus loosely, in such an anthropomorphic manner) to construct a living creature, it has the choice of giving it any one of the billion or trillion forms that are conceivable or possible. If, therefore, its design was to frame a new set of living creatures out of ultimate matter, it is very probable that each of these would turn out quite different from the others, and that they would bear one to the other hardly any, and that merely the very feeble, resemblance, which might arise from this circumstance, that they would all be in the end simply the expression, the outward manifestation of one identical fundamental chemical law, the organ of one and the same function. As things now are, however, at least so far as our information bears out, living creatures are no longer created out of the elements by some spontaneous act on the part of Nature, but are built up out of them by the intervention of some parent organism. The matter which goes to make up the new living creature has passed through some mechanism already in existence, has been by it treated, and has consequently received impressions from it. It is, however, still an unexplained and yet hardly to be questioned property of matter, or rather, to be more explicit, of its combinations, to retain the impressions, groupings, and shapes which it may have received. This is what is at the root of memory in the individual, of heredity in the species. The new living creature, the materials of whose composition have been manipulated by some other living creature, will therefore retain the features impressed upon it by the latter, and will become like it. Thus it is that two distinct laws work upon it, namely, first, the original law of life, which endeavours to manufacture independent organisms, organisms which are distinct from and have no connection with the rest, which need merely be adapted to the building up and breaking down of albuminous compounds of nitrogen, a work which, by the way, it can do in any one of innumerable possible forms, and which need not generally resemble any given form; and

secondly, the law of heredity, which endeavours to make the new organism resemble its parents, by whom it has been created.

Each individual is accordingly the result of the operation of these two influences, the primeval law of life and heredity. The former seeks to create fresh forms, adapted to the performance of the business of life, while the latter seeks to repeat a plan already in existence, that, namely, of its parents. I cannot sufficiently impress this truth upon you, namely, that from my point of view an unrestricted liberty of choice among all available forms was the original feature, and that the feature of similarity to parents which has encroached upon that liberty only became developed at a later period ; since it is this hypothesis alone which makes the entire Darwinian theory comprehensible, and the neglect of which makes that theory not an explanation, but only a verification of facts within one's observation.

In fact, if, as Darwin and with him the entire troop of his followers and interpreters think, heredity is to be considered the original and more important of the laws which decided the development of the individual, how then would any deviation therefrom or any improvement thereon be conceivable? The product would have under all circumstances to retain a resemblance to the producer, and if its external relations made this impossible for it, it would simply have to fall to the ground. The great phenomenon of adaptation to one's allotted conditions of life, which, according to Darwin, is one of the chief causes of the origin of species, would continue to be a perfectly irresolvable problem. My theory, on the contrary, offers a solution of this problem. The living creature, I repeat, is not limited to any one form more than another, it as a rule only requires to possess such a form as will render the absorption of oxygen and the formation of protoplasm possible to it ; it is just this original absolute liberty which enables it to assume the form which is impressed upon it by its external relationships, just as a floating body at rest will be driven towards that one of all the directions possible to it, to which even the very slightest external impulse urges it. Is it the parent organism which gives it its particular

form? Very well, then, the young organism will also assume the form of its parents. Do the external conditions among which it has to live seek to transform it, to make it dissimilar to its parents? Very well, then, it will resign its inherited form, and, yielding to the new impulse, assume that which the external conditions of life endeavour to force upon it. In this way we can explain adaptation to circumstances, which, if this theory is correct, becomes no longer a contradiction of but an analogy to the law of heredity.

Biology, the science of life, only recognizes the individual, not the species. The former alone is something actually existent, independent, clearly defined, while the latter is much less distinct, nay, is frequently quite incapable of being defined with certainty. Two individuals can never be confounded the one with the other, nor blended together, under any circumstances, not even in the case of such marvellous creations as the Siamese twins. But of different species this cannot be said; these are, on the contrary, in course of a constant though at the same time slow transformation, their limits keep varying and get confused almost beyond power of recognition, they become developed into new forms, and are in one geological period quite different from what they were in an earlier period, and equally probably from what they will be in some later period. That which, nevertheless, binds the individual to the species is the law of heredity, that is, the innate quality of matter to perpetually retain the arrangement which it has once received, and only to depart from it when compelled to do so by some new impulse, which happens to be stronger than the aforesaid tendency to retain its old arrangement. The present economy of Nature appears merely to recognize the evolution of life from life. Now, theoretically, it would be perfectly conceivable that life might be evolved anew again and again out of non-living matter. That this does not happen has probably its foundation in this fact, namely, that life can be produced by the activity of parent organisms with less exertion than by the combination of the elements, and it is a well-known feature, and one which pervades all Nature,—Leibnitz was the first to refer to it, but its existence has also quite recently been denied by Charles

Vogt upon very powerful grounds,—that Nature seeks to attain each of its aims with the exercise of the greatest possible economy, and the least possible amount of energy conceivable for the purpose. Thus we have now arrived at the logical sequence of the phenomena of life—the true scene of action of the latter, the form in which they are first visible, is the individual, not the species. That nevertheless individuals bear a likeness one to the other, and that the species has a semblance of permanence, are caused by two facts—namely first of all, that at present, so far as our knowledge goes, life only proceeds from some other life; and secondly, that the law of heredity which has just been explained is in operation. Derivation from some parent organism gives rise to resemblances and to a certain mutual attraction between individuals, while the original law of life gives rise to as much difference and independence. As a matter of fact, there are actually no two individuals who might be deemed perfectly like one another, and it is even probable that each individual is in the inmost and most secret chemical and mechanical processes of his fundamental component parts incomparably more varied than any one race is from any other. This also explains the possibility of egoism, which would be inconceivable and inexplicable if it were necessary to consider the race as something actually existent, and not as a mere abstract conception of the human intellect. The individual begins by feeling as if he were the only thing existing and the only thing living, and it is the better training of his mind which first causes him to perceive that there exist necessary relations between him and beings similar to him, and that he can promote his own well-being by paying them a certain amount of attention. The social instinct therefore is not an original impulse like that of independence or individuality, but an acquired intuition of the fact, that to act in the interests of others is not opposed to, but a deepening and broadening of egoism, and thus man attains to an ideal institution of the community of interests, just as he has attained to the material institution of the police and the land registry system, namely, in both cases by a realization of their usefulness to him.

And now this biological discussion, which to the reader perhaps has seemed hitherto a deviation from my course, fits as a whole into the scheme of my present investigation. The law of heredity it is that produces what is commonplace, while the original law of life produces what is original. The lowest processes, which are at the same time the most necessary and therefore the most frequent, and which certainly the father and ancestor must also have performed, come within the scope of the law of heredity; the higher and highest processes, on the contrary, which are seldom necessary, and with which the progenitors of the race perhaps had never to trouble themselves, or, if they had, only on such rare occasions that they failed to leave behind any impression on their organism sufficiently deep to permit of being inherited, are performed independently and in an original manner. In the case of a situation in which it frequently happens to find itself, or which is identical for many or for all, the organism will act in the common way; but in the case of a situation which is presented to it for the first time, it will be original in its mode of action if it cannot escape from it. The greatest genius equally with the humblest water-carrier eats with his mouth and hears with his ears. and the French poet strikes the nail on its head when he says—"Somebody is being imitated whenever a cabbage is being planted." Those processes, which are common to all men, are commonly performed by all men in an identical manner. On the other hand, a difference will immediately be exhibited if two men, say, are placed at the head of some body like that of the "Pilgrim Fathers," who set sail for America in the *Mayflower* to found a new community, or if the task were entrusted to them of subduing an unknown world, and constructing there a new state from the very beginning.

An organism which is merely charged with the average quantity of vital power, never as a rule comes to such a pass as to be compelled to complete the higher and highest processes. It does not seek for any state that has hitherto been unnatural to its ancestry. Should it chance contrary to its will to be placed in a new state, the first effort it makes is to escape out of it; should that effort be unsuccessful, it will

next attempt to deport itself in accordance with such analogies as have been familiar to it, that is to say, to behave while in this state as it has been accustomed to act while in other states of which it has had more frequent experience and which chance to be similar to the one in question, and should it fail even after using these trifling means of subsistence to become habituated to the demands of the new state, then it just suffers it to get the upper hand over it and submits to it, though it may nevertheless be that vital energies remain concealed in it, which in the situations that had fallen to their lot had no opportunities to develop themselves, and in their straits became dispirited; on which account it always remains within the stereotyped cycle of heredity, recoils before the slightest variation of the lines of its resemblance to its ancestors and comrades in mediocrity, and concludes its life as this had started in its case; as if it were a mere image of forms impressed upon it, which had existed prior to it, and happened to be in its neighbourhood. An organism, again, whose vital energy exceeds the average, either feels at once an impulse towards new states, or, should it happen to be transplanted into such, it subdues them to itself or becomes habituated to them, without paying any heed to given examples, or being influenced by its parents' course of conduct. An organism of this last kind grows in triumph up to and beyond the bounds of heredity, which are capable of attaining only to a certain fixed height, and at an elevation, to which feebler individuals never succeed in soaring, it unfolds itself without restraint into forms peculiar to itself and unlike all others.

I have now traced out and shown in fullest detail how very important to the individualistic and average kinds is the quantity of vital energy possessed. Should only such an amount be possessed as would be conveniently sufficient for the procreation of an organism of a kind already stereotyped, then the product will retain the particular form transmitted, and the species at large will, owing to its being handed down in this way, be assisted in maintaining its typical physiognomy; should there be on the contrary an excessive amount of vital energy, this will overpower that tendency to conservatism

which limits matter to its inherited constitution, it will develop in itself, with the utmost freedom and according to its peculiar impulse, its outward form and its scheme of growth, and one might even go the length of saying that it comes to be the source of a new subspecies of the race. Life is the noblest of the functions of matter; it is its possession that instils into all living creatures an instinctive veneration, similar to that which pecuniary wealth instils into vulgar natures; and it is simply because the individualistic type originates from a greater wealth of vitality, that it is recognized as more genteel than the average type, which on the face of it bears the implication of a less amount of income from its fund of vital energy. Thus it is too that what is commonplace is looked down upon, and that one tries to be original, or, if one is unable to be that, at all events to appear to be so. The wish not to belong to the mob implies the holding of oneself out to be a millionaire in respect of vitality. To despise the Philistine is a form by which admiration for life is intended to be conveyed. One is far more proud of being the originator of a distinct species than one of the descendants, of being the original writing than a press copy, and considers it somewhat better to figure as the title-page of a book than as one of the successively numbered pages therein. Just as, however, even the most virile parent is nevertheless at the same time a son, and as every founder of a new line has had ancestors extending back to the ascidians or to the other earliest forms of life, so even the most individualistic member of a species is nevertheless intimately connected with it, even the most powerful degree of vitality gives place in its lower processes to what is common, the apparent contradiction between the withdrawal of more genteel natures from and their occasional mixture with the mob is removed, and if the Philistine care to do so, he can to some extent pride himself on this fact, that even a Goethe or a Napoleon, with all their originality, were unable to weep or laugh, sleep or shave, in any different way from that to which he is accustomed.

In the case of those living creatures that are subdivided into sexes, it seems as if vital energy and the procreative impulse were less powerful in the females than in the males.

Why this should be so I am unable to say, but it is an acknowledged fact that this relative proportion holds good. Darwin has accumulated in his *Descent of Man* over a hundred pages of particular observations, the result of which is to prove that in the case of most species of animals it is the female that maintains the distinctive type of the species, whereas the male differs from it individually, frequently to a very marked degree. Among females then the law of heredity prevails most, while among males that of individuality prevails, which I hold to be the original law of life. This relative proportion holds equally good of the human species. The female is as a general rule typical, the male individualistic; the former is characterized by the average, the latter by a special physiognomy. This view is certainly contradictory to that which is generally accepted, but the latter view is undoubtedly based upon erroneous data. It has originated in this fact, that one's conceptions about women are commonly derived from poetry and novels. Poets in their pictures of women have been influenced not by a spirit of honest observation, but by unconscious sexual excitement. In literature of the politer kind woman is never depicted in all her plain naturalness, but is manufactured after the ideal of some ardent spasmodic male imagination; the poet never simply delineates but pays his court; whenever he treats of woman, he ceases to be an impartial observer and becomes instinctively a suitor for her affections. This completely falsifies the observation, and it may be affirmed as a fact that woman appears in the poetry of all peoples and of all periods not as she really is, but as she presents herself to an infatuated visionary. This is but the natural result of this, that originally all poems were composed by men. If women had invented lyric and epic poetry, the picture of woman in literature would probably have been made an impartial one, and therefore a completely unembellished one. At the present day, when the writing of fiction, in several countries at least, has become almost exclusively a female occupation, even the feminine composer repeats that ideal picture of woman which had been manufactured by man and handed down to her, and that simply because she is incapable of

rising above what is presented to her, and of thinking in an individualistic way. "Woman is changeable as the tide and of manifold variety," we are taught by a profoundly thinking philosopher; "Who can boast that he understands woman?" exclaims a lyric poet as he turns up his eyes and smacks his lips under the influence of his happy thoughts; "Every woman is a mystery and a problem, and none of these sphinxes resembles any other one," maintains a novelist, who proceeds to make his ideas clearer by spinning us a yarn a yard long about adventures with robbers. All this, however, is hollow talk, at which truly sensible women simply laugh, and which only pleases silly geese because they take it as being a personal compliment. Women bear an incomparably greater resemblance to one another than do men. If you know one, you know them all with but few exceptions. Their thoughts, their feelings, nay, even their physical appearance, are all of one type, and Marguerite, Juliet, and Ophelia seem so similar one to the other, that they might quite well be regarded as sisters of somewhat different dispositions and somewhat different trainings. This explains how it is that women adapt themselves so readily to all social positions. A stable-boy, who by the favour of an empress gets elevated to the rank of Duke of Curland, nevertheless smells of horses all his life. The daughter of a drum-major, on the other hand, who becomes a countess through having attained the mastery over a king's affections, in a few months' time, nay, sometimes after only a few weeks, shows not the slightest difference from a lady who was by birth entitled to be included in the Almanach de Gotha. There never are such persons as female parvenus. So soon as a woman has adapted herself to the forms of a rank in life that may be new to her—and by reason of her appreciation of outward show and little things she acquires this state with astonishing facility—she becomes completely assimilated to that rank. There is even between a princess and a washerwoman but a very slight difference, in fact the essential feature in both is femininity, or, in other words, the repetition of that typical physiognomy which has been given them by others. Michelet summarizes the whole philosophy regarding women in a single phrase, which he

appears to have formed with the cutting quality of a satirical verse; he says—"Woman is a personality." That is one of the greatest mistakes made by this fiery and enthusiastic but superficial author. The reverse is the truth, namely, that woman is not a personality but simply a type.

No doubt there are women also who come under the so-called original category. May I, however, dear reader, give you a bit of advice? It is this, Beware of the original woman. Deviation from the type is in women, in eighty cases out of the hundred, significant of disease. The individualistic woman differs from the general type as a consumptive woman does from one in perfect health. And in the twenty remaining cases, which I cannot bring under the head of disease, the singularity is due to an interchange of sex so far as the intellect is concerned. What is intended to be conveyed by this ought to be very generally known. In a case of that kind there is the body of a woman, but the character, the opinions, and the tastes of a man, or *vice versâ*. Public opinion is on the right track, when it terms an original woman in simple language as a man-woman. This expression completely summarizes the explanation of the phenomenon. So soon as a woman departs from the uniform type, she loses the most important of her psychological marks of sex. I can in proof of the fundamental truth of this view bring this fact forward, that individualistic women as a rule only make any special impression on men of a degenerate physiognomy, whereas manly individualities of a sharply defined type prefer to be enthralled by the average kind of female. This is so common an occurrence that I would be performing a superfluous task if I called to mind such examples as those of Goethe, Heine, Byron, Victor Hugo, etc. What it all comes to is this, that the man in whom vital energy is not powerful enough to enable him to aim at the creation of new forms, seeks unconsciously to satisfy the fundamental instinct of his organism, that, namely, of the formation and development of an individualistic type, by union with a woman who is more richly endowed with vital energy than he is himself; while the man who has been better provided by nature in that way has no

need to do this, he can trust to the self-sufficiency of his own peculiar constitution.

In close connection with the typical character of woman is the wretched commonplaceness of her tastes. It can't be denied that any unusual masculine appearance, whether its unusual character is merely a physical or an intellectual one, excites, like everything else indeed that is out of the common, the imagination of women, and exercises a powerful fascination over them. Now what does that show? Surely nothing else than this, that what is novel works with an attractive and enthralling influence upon woman, as indeed it also does on all the higher animals. Her fundamental instinct, however, prompts her irresistibly to keep to what is usual, and the truly average man, who varies from the normal type neither by too offensive a stupidity, nor by an extraordinary degree of sharpness, who in his compliments confines himself to good precedents, in his conversation gives the weather all due credit, upholds the ideals inculcated in the public schools, and dreads the black man who is supposed by common consent to exist, who shares the opinions and sentiments of the leading well-to-do citizens, and therefore considers the intellectual sensibility of his period in choosing the shape and colour of his neckerchief, this masterpiece of a Raphael who paints with stencil plates will turn the heads of ninety-nine women out of a hundred, and no freehand drawing of the higher type of humanity would be able to come near it.

In the course of centuries perhaps there will be but one woman born who has any ambition. I hope you will not confound this superior sentiment with that vulgar kind of vanity which delights in pretending to be ambition. Intriguing women, who like to command, actresses, affected dolls, priestesses of drawing-rooms who wish to shine, sometimes actually imagine in their own minds that they are ambitious; but they are not so in the slightest degree. What they really aim at is the immediate effect of their personality; they desire to procure for their base egoism, the satisfaction of being universally reckoned as beautiful, well-dressed, and intellectually brilliant; they desire to excite envy in many other women, to bring many men to their feet, to cause it

that every one should turn his eyes towards them on the streets, and direct his opera-glasses towards them in the theatre; all they do simply aims at the most superficial and simple manifestations which accompany local notoriety. Ambition is quite a different sort of thing; it is the powerful impulse to embody one's own personality in some production, some achievement, which will secure to it a continuance far beyond the term of the corporeal existence of the individual; it implies a vehement resistance to the universal law of transitoriness, the noble desire to maintain one's individual being, which is felt to be fully qualified, to be strong and necessary, in its typical form, and to constrain Nature herself to entertain a respect for it. What is called ambition too is simply derived from the original law of life, and is an extreme manifestation of it; it impels indeed not only to the creation of independent organic beings, which require to be merely themselves and not similar to any other, but also to efforts to maintain the beings so created, to ensure their continuance, and if possible their development into a new species. Ambition is due to an abundance of vital energy, such as women rarely if ever possess. The latter, accordingly, dream of conquests, but not of what is called immortality. They busy themselves only with that society which can assure them with perfectly scalding fervency, "Madam, I love you;" for the unborn generations of the far-distant future, whose homage and bouquets of flowers cannot reach them, their coquetry has no thought. A longing to deviate from the race type and to found a new one, of which she should be the original, they never have.

It is in the predominance of the law of heredity in the female organism that all the rest of woman's peculiarities of mind and character find their explanation. She is almost invariably a foe to progress, and the firmest support of reaction in every form and in every district. She sticks vehemently to what is old and traditional, and considers novelty, so far, that is, as it is not somewhat of a fashion from which she hopes for some enhancement of the effect her appearance creates, as a personal affront. Servilely copying, as she does, what has been done before her, she transforms in

her world of thought religion into superstition, rational institutions into external forms, acts that are full of meaning into mere empty ceremonies, and the etiquette of social intercourse, which originally was inspired by feelings of consideration for people around us, into a tyrannical and stupid code of rules. She is, always excepting the rare cases which I have conceded above, an intellectual automatic machine, which must run down until it comes to a standstill just as it was wound up, and which cannot of its own accord vary the mechanism of its course.

Since I have thus set out in full detail my biological argument as to the origin of what is commonplace, it follows as of course that I should now proceed to give my view about the limitations of individuality. Subjectively, its title to act is unconfined ; objectively, it is circumscribed. If I am by myself, it is in my power to be original ; if I walk out among the mob, to do what is usual is my first duty as a citizen. Thoughts and actions which exclusively concern individuality as such are in every case unrestrained by the guardianship of custom ; acts which encroach upon the scope of another's life must submit to be judged by the rules of common tradition. I certainly am, in virtue of the original law of life, an independent, self-sufficient individual, a species as it were unto myself, not altogether like any other being, and developing myself according to an organic scheme peculiar to myself ; but in virtue of the law of heredity I nevertheless am, in respect of a certain extent of my surface, connected with the rest of my species, with the beings who resemble me in consequence of having the same ancestry, and this portion of my surface is withdrawn from my unrestrained personal jurisdiction. In this, matters go with each of us as with the Siamese twins. Thinking is within the power of each head for itself, according to its pleasure merry or sad, according to its ability smart or stupid ; walking or sitting, however, are only within the power of both bodies combined. Propositions like these have a broad application. They justify the right of universal suffrage. They show a reverence for the principles of democracy. They are the basis upon which has been founded the idea of the supremacy of the majority in

political and municipal matters. My intellectual sphere of vision belongs to me alone; within its limits I need not suffer anything that causes me trouble, or that does not please me, and I may throw the cotton nightcap belonging to my neighbour, the tuft of which rises up offensively before me like a forest-covered mountain peak, beyond my horizon with the toe of my boot; but the streets, the city, the country, belongs equally to us all; in these spheres you are my brother, my worthy Philistine; there I am obliged to read your wish in your eyes; there I dare not do anything that you do not like, and should I want you to do me some favour, it is my detestable duty and obligation to report the fact to you in a speech which you can understand, and to support it with arguments which may convince you.

There is no necessity therefore that we should have an original politician, legislator, or statesman. The more commonplace each of this class of persons is, so much the better is it for him, so much the better for his nation. The man, who is called upon to construct institutions for the masses to live under, must take his standard from the masses and not from the few. The regimental tailor works from average measurements, and not from the physical proportions of some splendidly developed fusilier of his acquaintance, and what the result is when the fox invites the stork to dinner, and places the different victuals before him on his family plate, can be read in Schiller's suggestive fable. The natural play of our energies, moreover, of itself prevents any originality in our treatment of the business of humanity at large or of a nation. One does not require either to be a man of special profundity, nor to be specially quick in respect of power of observation, in order to notice how mediocre every great assembly is. Imagine four hundred Goethes, Kants, Helmholtzes, Shakespeares, Newtons, etc., collected together, and cause them to discuss and vote upon concrete questions. Their speeches will probably—and even that is uncertain—differ from those of a parliamentary assembly, though not so their conclusions. And why? Simply because each of them, besides his personal particularity, which marks him out as the distinguished individuality that he is, possesses the inherited

peculiarities of the race, which are common to him not only with his fellows in the assembly, but also with all the nameless passers-by on the streets. We may express the matter thus, that all normal persons possess in common something of pretty much the same value, which we will call *a*, and the more conspicuous characters that and something special besides, which varies in each individual, and which we will have to indicate differently in each case, as by *b*, *c*, *d*, etc. Imagine now four hundred persons collected together, and suppose them all to be men of genius; the necessary result would be this, that we should have four hundred *a*'s, but on the contrary only one *b*, one *c*, one *d*, etc. In such a case no other result would be possible except this, that the four hundred *a*'s would gain a brilliant victory over the one *b*, *c*, *d*, etc., that is to say, that what they possessed in common would put to flight what was individual, that the cotton nightcap would overturn the professional hat. Things that are unlike are incapable of being added together, that has been learned long since in the public schools. This is in fact also the reason why a combination of flat-brained individuals is conceivable, but not a combination of men of genius. It is possible by putting the matter to a vote to obtain the verdict of a majority on the subject of the flavour of sauerkraut, though not on the subject of the value of theories of life. If votes are taken regarding these last, in all probability one vote would be awarded in favour of each such theory, that, namely, of its author.

As a matter of fact then, the Philistine is lord in the land, and the most goat-footed crank must dance in harmony with him whenever the quick waltz in which all must take part is played. The real substance of all public institutions and of all politics is not the result of the mental labour of a John Stuart Mill or a Herbert Spencer, but the stereotyped ideas of honest Kunz, who is only able to decipher the contents of his little local paper by the assistance of the forefinger that guides him along the lines, and the most individualistic man of genius loses his distinguishing physical characteristics and disappears beyond recognition amid the huge procession, when the mob streams to the polling-booths on election day.

Ought then the man of genius to refrain from this, namely, the publication of such of his thoughts as are new and at variance with all others hitherto known, the striving for their realization, and the desire to convert the Philistine to them? By no means. He ought not to do any such thing; indeed, he cannot under any circumstances do it. For have we not seen how each original type possesses the uncontrollable fundamental impulse to force itself upon the general type, and to shape the latter after its own pattern? What, however, the man of genius ought to refrain entirely from is this, namely, the propounding of his opinions as commands and the expecting the host of the Philistines to wheel inwards at it like a well-drilled regiment. He ought to preach, not command. There is a tremendous difference between these functions; the same difference as there is between a missionary and a general. I have already made the statement that the Philistine is the arable land of the man of genius. This illustration appears to me to be so appropriate that I feel bound to recur to it. The individualistic thinker has to practise a rough system of general husbandry, just as the trainer of childhood practises his art of scientific gardening. The latter engrafts upon wild trees likely sprigs which have been developed upon other improved and older trees, while the former sows his grain with wide sweeps of the arm, and has, after duly manuring and harrowing, to wait patiently until, after months of silent growth, the harvest is ready to be reaped. The whole thing is only a question of time. The average man prefers to inherit his ideas instead of working them out for himself. One has consequently simply to admit one generation to a share of that which one wants to become the common property of the next succeeding generation. Conceptions and trains of thought, which one's father and grandfather have had in their heads before one, and which have been repeated again and again during long generations, have become a component part of one's organism, have become organized, and to call them to mind involves on the part of the individual no more exertion than does the act of walking, the act of eating, the act of sleeping, or in fact than does the fact of attending to any other function which

has become organic. New conceptions and trains of thought, on the contrary, which strike the individual for the first time, disturb the whole work of his thinking apparatus, render new institutions necessary for their reception, and demand attention and intervention on the part of the will and consciousness. It is like the process of mechanical weaving. If an old pattern is being woven, for which the machine has been adjusted, and the workman has been trained, then everything proceeds evenly, and as if it were asleep; the workman can become lost to thought and dream the time away while the texture is growing yard by yard. Should, however, a new pattern be intended to be worked, the loom has of course to be adjusted to it, the belts have to be tied up differently, the shuttles have to be given a different course, the superintendent has to approach and himself lend a hand, the workman has to rouse himself out of his comfortable state of collapse and attend to the matter in hand; in a word, the work no longer goes on of its own accord, but has to be directed by hand and head. Men of the average type are trained to intellectual work of an organized kind and are incapable of undertaking any other. They are neither strong enough nor skilful enough to adjust their looms to new patterns. The superior nature has accordingly the task, not only of inventing new patterns, but also of altering from top to bottom the looms in the huge factory which is termed humanity, in such a way as to make them capable of weaving the new patterns just as previously they had been weaving the old ones. The mob resists the introduction of new ideas, not because they are unwilling to think them, but because they are not able to think them. That demands some amount of effort, and all effort involves pain, and it is just pain that one tries to avoid.

This seems to be contradicted by the observation that the mob is on the other hand greedy of what is novel, and that everything that is novel succeeds with them. This contradiction is, however, only an apparent one, as quite a short inquiry will suffice to show.

Changes in our nervous system alone attain to our perception and to our consciousness. If there is no excitement

in the nervous system, then also the feeling and thinking personality has no experiences. The intelligence department in our organism is by no means constituted as if there were seated at the main centre of the personality a vigilant superintendent-in-chief, who, at intervals of a few moments, keeps despatching messengers to the ante-rooms and outer courts to ascertain whether anything new is in progress; the superintendent-in-chief who is here rather remains immovable at his desk in the inmost office, and has all communications from without concentrated there. Should no communication reach him, he simply remains quiet, may even fall asleep, and at all events shows no sign of life. If, however, the intelligence is brought from without, "There is a knock at the right-hand gate!" or, "A stone has been cast against the window in the first floor;" or, "The sentry in the outer court is receiving a supply of provisions!" or any other information of that kind, then the superintendent-in-chief becomes alert, and at all events sends this message back at once, that the intelligence has arrived and been taken note of, or he replies with some command which in its terms lays down what is to be done under the circumstances of the event that has been announced. If it were conceivable that the universe could but once become frozen into perfect immobility, then our nerves would simply remain in the condition in which they happened to be at the time, nothing would influence them, nothing would excite them, nothing would produce any change in them, which might come within the comprehension of the consciousness. Our eyes would not see, nor our ears hear. The sentries would still maintain their stations at the outer boundaries of our personality, but they would have nothing to watch and nothing to report. In that event too we would be unable to think, and our consciousness would be, so to speak, oppressed with a dreamless sleep. To experience therefore means to realize that within some department of the nervous system an already existing state is being transformed into some other. The almost immeasurably short interval between the cessation of the one state and the commencement of another forms properly speaking the entire contents of our sphere of perception. It is as a result

of this that a man, in order to think, in order to become conscious of his own personality, has to be prompted; the prompting, however, is only effected by some change, that is, by something novel. And since the consciousness of one's own personality is the necessary prerequisite of all agreeable sensations, nay, is truly in itself a delightful feeling, perhaps in fact the most powerful of all, it follows that the novelty or change, which by exciting the nerves becomes the source of consciousness, is experienced as something agreeable and eagerly pursued. But, of course, that such a change may be experienced as pleasant, it must not be abrupt or violent. The novelty which excites the nerves must differ from the older one which has preceded it only very slightly, only a degree, a shade. It ought to be the neighbour of the older one, and make its appearance as a continuation of the latter. By way of making this clearer, let me cite a familiar illustration. A new cut of dress-coat will readily come into fashion, if it leave unaltered the main outlines of the present style of dress-coat, as well as the general characteristics of this airily light, yet so dignified article of apparel, and merely differ from its predecessor in insignificant details; as, for example, if it should exhibit shorter or more decidedly rounded tails, broader or narrower breast-flaps, and these last plain or lined with silk; on the other hand, it would necessarily turn out a difficult matter for a strong-minded and unprejudiced tailor to bring out a garment intended for special occasions which was radically at variance with the present style, and was made in imitation of a Roman toga or something even less familiar. Anything which is entirely different from what has preceded it excites disagreeable feelings, which may even become intensified into the strongest aversion and horror. Lombroso, the great Italian psychologist, has invented a word which happily expresses this kind of feeling—he terms this aversion, this horror, "misoneismus," that is, a state of hostility to what is novel, and proves its existence among uncultured men, among children, and even among the lower animals. But, to continue my simile of the loom—it is not of the least consequence either to the machine or to the workman who tends it if the threads happen to be

of a different colour, so long, that is, as the pattern remains the same. An alteration in the colour of the texture does not necessitate either any adjustment of the loom or any special attention on the part of the workman. It is only when the pattern is in course of being altered that the trouble which has already been depicted by me is entailed. This then gives the explanation why what is novel is able so certainly to please the mob, and why on the other hand they nevertheless avoid what is really novel, what, namely, is specifically different from their accustomed ideas, and that with true fury and frequently with the energy of despair.

I am very much inclined to believe that savage races disappear at the approach of civilization simply for this reason, that the vast alteration which takes place in all their surrounding circumstances demands of their minds too many new ideas and individual efforts. By himself alone, without the slightest assistance from the processes of thought that he has inherited, the isolated savage has to receive his new impressions, dispose of them, assimilate them, combine them into ideas and thoughts, and respond to them with individual conclusions and acts which are utterly foreign to his organism, and to which his brain and his nerves are not adapted. That involves an amount of work of which the man of culture can hardly form any adequate conception. For even the man of culture who is most individualistic and most distinct from the other members of his type but rarely, comparatively speaking, arrives at such a position as to be able to receive impressions which are entirely novel or to create combinations of thought and conclusions which are entirely novel. The savage, on the other hand, is bound to engage in this chief of all the actions of the human organism suddenly and continuously, and on the most extended scale. It is not to be wondered at then, that it soon completely exhausts him, and that he breaks down under it. If there happened to be some other system of culture which was as immeasurably distinct from ours as ours is from that of a Papuan of New Guinea, and this system were without any preparation to be forced upon us, even the greatest philosophers and statesmen of the white portion of the human race now

existing would in presence of it languish and disappear, just as completely as do the savages when our system of culture is imposed upon them.

It is from such reflections that my theory about the relations subsisting between the man of genius and the Philistine is derived, a theory which is quite opposed to that of Carlyle. The seer of Chelsea causes his hero to make his appearance like a Captain Cook among the throng of average persons, and demand of these, at the point of his good guns and cannon, submission, recognition of his supremacy, and admiration of his more developed art and science. I on the other hand do not regard the course of life of the more select of mankind as if it were a voyage of discovery to the South Seas and a landing among naked cannibals. I cannot allow him the right to expect of the typical public, who have inherited their ideas in an already advanced state, a mental activity equally individualistic and independent of habits that have become organic with that which has been made easy for him, the unclassified individual, by the greater amount of organic energy that he possesses. If solitary greatness fail to satisfy his impulse to work upon others, if he do not care to spend his whole life, like the unhappy King Louis of Bavaria, sitting in a theatre and watching the play, which his thoughts are performing for his benefit alone, as an isolated spectator, if he have that tendency which is inseparable from vigorous vital energy to secure the continuance of his form and to impress it upon other organisms, then he must engage for his spirit of originality a lady companion whose name is Patience. He must accustom the mob to the novel thoughts by little and little as to a foreign language or a scientific system of physical training, namely, by example, systematic exposition, and frequent repetition. In a word, the whole matter simply comes to this, namely, the subjection of average men to the yoke of a new set of habits which they can carry with the exercise of as little thought and trouble, and as automatically, drowsily, and ruminatively, as they did their former one, and which will exclude rash influences.

The reader will observe that in this discussion I constantly

oppose to one another new and old thoughts, and not better and worse, nor higher and lower, in short, that I refrain from making use of adjectives which imply praise or blame, or testify to a preference for the one, and an aversion to the rest. In the quiet or noisy struggle, as the case may be, which the individualistic minority wages against the typical majority, the whole question at issue is, as a matter of fact, simply this, how to substitute new theories in place of the old traditional ones; these new theories do not indeed necessarily require to be better, their real distinguishing feature is simply this, that they are new, that they are different from the customary ones. The mob is commonly termed stupid. This is an act of injustice to it. If dealt with apart, it certainly is not stupid, it only happens to be not quite so sharp as the most prudent individualities of the period. It simply represents that degree of intellectual development upon which the best men of yesterday relied. The best men of to-day have, of course, advanced farther, but to-morrow the mob will get just as far as they are now, and in order to have good cause for calling them behind the times, or for turning up their noses at them, men of genius of to-morrow's period will have to be as much superior to those of to-day, as the latter are to the market-place class of to-day. The terms individuality and mediocrity possess then not an absolute, but only a relative significance. The exception strives to become the rule, the spirit of originality to become the type. Powerful natures possess the value of independently invented models, which ought to be faithfully copied by the average class of men. The style in hats which was but yesterday designed by some daring inventive genius, and created a sensation in the drawing-room of the private mansion, will be paraded to-morrow at the village church service on the heads of all the peasant maidens, without any longer attracting towards it the least attention on the part of the beribboned yokels. Wherefore this difference in effect? Has the shape been in any way altered? No. It has merely ceased to be rare. Commonplaceness is worn-out originality, originality the first conception, the *première*, as the French would say, formed by what is com-

monplace. We shrug our shoulders now-a-days if we catch a lyric poet in the act of comparing the eyes of his beloved to stars, and admire Lenau when he says, with one of his bold flourishes of imaginative power—"Upon her gay and variously coloured songs, the lark climbs happily to the skies." And yet the former simile is, properly speaking, a very beautiful one, much more beautiful than the latter. When the lover compares the eyes of his beloved to stars, he furnishes us, in the first place, with a perfectly comprehensible figure of speech; in the next place he has recourse, when copying the image of these eyes, to a style of exaggeration which cannot fail to flatter the vanity of the subject of his admiration, and enable her to form a favourable idea of his peculiar inspiration; and finally he connects the appearance of his beloved with the fairest phenomena in the universe, and exalts her as it were above her poor individual finiteness in order to make her co-extensive with the infinity of Nature itself. What sort of a position can Lenau's simile hold side by side with that, when at most it only puts before us the conception of a ladder, even though it be one that is gaily and variously coloured, up which a lark is climbing like a trained tree-frog in his glass, which may be very curious to behold, but is neither particularly beautiful, nor for that matter inspired! The comparison of the eyes to stars must certainly have exercised a profound influence on his contemporaries when a poetic genius of the darkest of all dark ages hit upon it for the first time. It has become commonplace. And why? Simply because it is an excellent simile. The image that Lenau has pounced upon will not meet with that fate. It is not profound enough for that. At which very result it is that I have been wishing to arrive: what is commonplace to-day is indeed not merely what was original yesterday, it is actually the bouquet of that originality, all that was best and most valuable in it, that belonging to it which deserved to last, not merely because it was new, but because it was new, true, and good. Hats off in presence of what is commonplace! It is the aggregate of all the most excellent productions of the human intellect down to the present day.

What is called public opinion, that is to say, the ideas of the mob, cannot be enjoined upon the highest intellects of any given period. It deserves, however, to invoke interest in even the highest intellects, in so far as it is the fruit of the whole of the previous development of mankind. The chaotic tumult of a mass meeting arises from the throats of great thinkers, who are speaking from their graves of frequently a thousand years ago through the throat, grown hoarse with beer-drinking, of some politically-minded jobbing shoemaker, and whosoever will take the trouble to resolve the uproar into its constituent elements may trace every party watchword, now become meaningless, and every empty phrase back to some first-rate author. The hackneyed quotations of the Philistine's speech began their career in life as wonder-exciting and brilliant turns, and every instinctive inclination and disinclination, every prejudice, every unconscious act on the part of the average man, was originally the outcome of severe and earnest mental labour on the part of some one of exceptional ability. A majority signifies in its ultimate analysis the past, a minority may signify the future if its individuality is maintained. Aristotle, the father of our present day information in most branches of knowledge, would now-a-days be unable to pass a Leaving examination anywhere, except perhaps in Greek, with the rudiments of which even he might not prove so well acquainted as some of our later philologists; Harvey's explanation of the circulation of the blood, which to his contemporaries seemed an incredibly bold and heretical contradiction of all recognized truth, is now taught in our public schools of learning without causing the least sensation, and the man of genius who at the present day stands distinguished high above the multitude, and prides himself on the very fact that he has nothing in common with it, and thinks and feels differently from it, and is above its capacity to comprehend,—this man of genius would probably be astonished, were it possible for him to return to the earth a thousand years hence, to hear the small boys giving expression to his most peculiar and startling thoughts with the same readiness and air of comprehension with which they might tell him the time of day.

What I fail, in this state of circumstances, to understand, is, why the conservative or reactionary party, who seek to maintain existing institutions and oppose all innovations, should be hostile to democracy. If they had any regard for their best interests, they would without exception become arch-democrats, would counsel the Czar to introduce universal suffrage into Russia, establish the Swiss Referendum in place of a Parliament, and assign to the decisions of popular assemblies an incomparably greater importance than to those of a council of ministers. The mob is always conservative, because it acts in accordance with the traditional impulses of the race, instead of in accordance with new individual trains of thought, and it is due to this fact also that it is able to feel at home only in its inherited conditions and not in new ones. It may fulfil some powerful individual will, which seeks to save it from the beaten tracks of custom, but, in consequence of its peculiar impulse to roam about unconstrained, it will never forsake the tracks hollowed out for it by preceding generations. Revolutions are invariably the work of a minority, whose individuality is unable to reconcile itself to the conditions which have been inherited by them, but are not calculated for them, and are unsuitable for them. The majority only follows them with reluctance, even though they may for several ages have been gradually becoming accustomed to consider their existing conditions as antiquated and unjustifiable. The only true innovators recognized by History were the enlightened tyrants, about whom conservative historians are so enthusiastic. On the other hand, those revolutions which proceeded from the masses simply relapsed again into commonplaceness without any one being able to prevent it. It would be an error to place as a frontispiece to an historical work written from the reactionary point of view, the portrait of Frederick the Great, or Joseph II., instead of that of one of the 1848 democrats, with the expressive hat of the period; and reactionaries, if they be intelligent and honourable men, must be well aware that the barricade is one of the supports of the present structure of state and society.

When, moreover, I employ the word commonplaceness in

connection with politics, it must be noted that it has, as I use it, the value of a mark of respect. Politics has for its aim to procure for the mob the most favourable conditions of existence possible, and it must, therefore, be adapted to the necessities of the mob. The latter thinks and feels automatically, that is to say, in accordance with traditional precedents and habits that have become organic; it is with justice accordingly that it demands that it is not to be expected to perform a novel, individual kind of mental labour which nearly always exceeds its capability. Whoever then speaks of politics speaks of the domination of the majority, commonplaceness, traditions. The saucy individual, to whom these expressions seem too impartial, may, for anything I care, put in their place the tyranny of mediocrity and old jog-trot manners. The strong-willed personality of individualistic development does not derive any satisfaction by placing himself in those typical conditions which are truly appropriate to the typical mob. So much the worse is it for the former. He does not surely on that account possess the right to force the short legs of everyday sort of people into his long pantaloons. Every institution which gives pleasure to the majority is good; not considered in itself, but because of the given conditions. This certainly cannot be otherwise. Let us suppose that the mob is labouring under a mistake, that it is promoting some irrational idea and formulating the most silly laws. Then for heaven's sake let us make haste to agree to its irrational idea and to pass its silly laws! The mob will very soon discover that as a result of these it is in a more wretched state than it was before, wiser and more far-seeing minds will reveal to it the causes of its distress, and it will be only too quick to agitate for the necessary changes. Should it, however, contrary to expectation, show itself quite contented with the irrational idea, and quite happy notwithstanding the silly laws, it would be perfectly justified in escorting the wise man who may attempt to convince it with all his might that it is behaving stupidly in feeling so happy, according to ancient usage amid a shower of potsherds, out of the temple, or in the less elegant style of later times setting the police upon him, as a treasonable individual

or a low class political agitator. If a mob will be idiotic, one must just allow it to remain idiotic for a time. It is a very fine and noble trait in the shrewder part of the race to show a willingness to undertake the difficult task of gradually training the mob to a higher degree of common sense, but the latter is entitled, first of all, to institutions and laws which are suitable for blockheads, and not for sly legal quibblers or Stock Exchange speculators. To the minority of clever individuals, who have to endure life under the same laws and institutions, I can only offer my heartfelt sympathy. Let us, by way of just one more illustration, imagine a city which is inhabited entirely, or almost exclusively, by blind persons. Theoretically that is undoubtedly conceivable. A person who has the use of his eyes would under such circumstances demand that a system of lighting should be introduced into the streets. His proposition too would in itself be certainly an excellent one. He might without much difficulty adduce the most convincing arguments in favour of the needfulness of gas-jets, or depict with the most overpowering eloquence the glory of a night illuminated by electricity. And nevertheless the blind inhabitants would, without a dissentient voice, reject the proposition, and I should like to see the man of sense who would not acknowledge that they were right, and the apologist for light wrong! Abdera is in need of a municipal assembly of its citizens, but the guests of the Platonic symposia are not allowed to share in it. Should notwithstanding the latter be resident in the city, and unwilling to emigrate, no doubt there still remains this course open for them, namely, to establish a club of their own, and make merry among themselves at the expense of their fellow-citizens.

I am of opinion that the Philistine ought to be satisfied with the position which I have allotted to him in the world. I regard him as a monumental phenomenon, in other words, as a memory of the past, though, it is true, frequently a badly preserved one—with mutilated nose, signs of a bungler's attempts at restoration, and a coat of whitewash applied by some blockhead of a town master dauber. His physiognomy is a chromo-lithograph of some design possessing great value

as a work of art. He is the heir of Genius which bequeaths to him perpetually its most precious treasures. I see in my imagination above his nightcap the green turban which identifies him as a descendant of the Prophet. Into its inner sphere, it is true, Genius will not permit him to enter. That is its exclusive property. There no majority holds sway. How Genius thinks and feels is a matter entirely and exclusively for itself. But when it steps out from its inner sphere, when it no longer permits itself to be satisfied with influencing merely by the force of its example, with working only for itself, it has to lay aside its distinguishing costume of individuality, and don the uniform of commonplaceness. In such a case he can only be an honoured Philistine among the Philistines. In England, a prince or a lord who desires to play a part in the administration of the metropolis must get himself admitted into one of the city guilds. He has nominally to become a tailor or draper, or something of the kind. Now that is exactly the kind of state to which I am referring.

III

A RETROSPECT

ONCE at a large evening party I was sitting in a corner, pondering over the spectacle which was presented to my eyes. The master of the house was forcing his hard and unyielding features into the icy smile or rather grin of a danseuse, which all too plainly shows that it has been borrowed for the occasion from some lender out of masks. The hostess was giving to her vermilion painted lips a sweetly amiable curve, and was darting occasional glances, tempered with a triple extract of poisonous envy, at some of her female guests who were younger and more pretty than herself. The young ladies were playing, sometimes cleverly, sometimes with so much awkwardness that one felt inclined to hiss them off or plaster them with rotten apples, the farcical *rôle* of startled and bashful country innocence; there were little mouths left open in forgetfulness amid sweetly embarrassing circumstances, eyes directed heavenwards in a state of causeless rapture; there were the most idiotic "Ah's" and "Oh's," outbursts of silly giggling, such as oysters might indulge in if a malicious finger were to tickle them, smart little repartees at which one felt inclined to raise his two hands to heaven and break out into a cry of lamentation; and accompanying all this charming affectation and mannerism was an amount of self-control that would be astonishing even in a warrior grown grey in military service, now and then a more austere and implacable side-glance at some coquette close at hand, a cruel or spiteful criticism of her appearance and toilette, a tradesmanlike depreciation of the value of the

latter, a scientifically accurate observation of the length of her conversation with the various gentlemen, and a reckoning of the number of those who danced with her and courted her; and between this cold-blooded mental arithmetic work every few moments a falling down on her knees in her own heart enthusiastically before herself, and the following form of words repeated with litany-like frequency in ardent worship of herself—"Thou art, nevertheless, the prettiest, the cleverest, the sweetest of all; Amen." The young or would-be young gentlemen were worthy partners for this "charming bevy of ladies," as one is indeed almost bound to say. They stood admiring the whiteness and smoothness of their expanse of shirt-fronts, the brilliancy of their pointed flat-soled shoes, and the hang of their swallow-tailed coats. They were able almost to imitate the trick of the chameleon, as they gazed with one eye lovingly into the eyes of some maiden, and with the other far more lovingly into the mirror. The void in their minds was occupied with but one image, that, namely, of their own irresistibility. Did one of them chance to converse with a lady he took care to watch with the utmost degree of attention on the part of all his intuitive faculties the effect which he was producing upon her, and which he was doing his best to heighten by hundreds of comical tricks of his body, voice, looks, and language. All the while the lady also was engaged simply and solely with the endeavour to produce upon him as profound an impression as possible, and the conflict of these two immeasurable vanities, this twofold unsparing egotism, left visibly behind in the lady and the gentleman a delightful self-satisfaction, such as the organism experiences when it becomes conscious of having expended its energy on some great and useful work. In addition to these male and female fools, who are so passionately fond of themselves, in addition to these abandoned scalp-hunters of both sexes who try to seek out victims in a drawing-room as if it were a primeval forest, with the view of stringing a set of trophies on their belts, there were other forms also that might engage the spectator's notice. Practical suitors besieged the mothers and aunts of wealthy heiresses. Repulsive-looking flat-heads formed in

groups about some stupid and shameless-looking coquette or other, about whom all kinds of scandalous stories were told in whispers, while their sensual eyes and their satyr-like laughs betrayed thoughts that they dared not express, but that delightfully excited their degenerate senses. Others again thronged round a consequential young man, the influential private secretary of the chief minister of state, and were not ashamed to listen to his empty platitudes with cringing smiles of approbation. A famous poet was being pressed into a corner by a couple of pretentious ladies, who did their utmost to conceal their rings of age, and compelled by way of justification to give utterance to silly, commonplace remarks about various poetical works. A profound philosophical thinker strayed in the most innocent way into a small circle that had gathered closely about a puffed-up painter, and was even so good-natured as to take part in the conversation there. The painter talked of nothing but himself, his rivals, his pictures, and his successes, and allowed the thinker for fully half-an-hour opportunity simply for incoherent, nay, unmeaning remarks, on thinking over which he must himself have subsequently blushed. An actor again was declaiming theatrical anecdotes of doubtful taste with an emphasis and persistence as if he were standing on Mount Sinai proclaiming the gospel of salvation, and there darted from the eyes of his fair listeners such flames of admiration that they almost burned holes in the waistcoat of this officiating comedian. A stout millionaire surveyed the brilliant moving throng before him, and thought to himself in his pride how much greater and more exalted he was as compared with these poets and philosophers, actors and painters, insignificant personalities to whom fashion or the good opinion of society paid some degree of respect, but who nevertheless, taken all together, were not worth the hundredth part of his signature. Thus did this company wind about—this mixture of idiotic dulness, of silly affectation, of little-mindedness and coarse feeling, of adamantine self-conceit and homely stupidity, not to add further epithets—at one time in the dance, and at another in conversation, to the harmonious accompaniment of music or the clatter of plates

and cups. Five or six hours passed in this way one after the other before the party prepared to break up with long faces and black circles round the eyes.

When I got home I began, in accordance with that unfortunate habit of mine, to reflect upon the impressions of the evening. To what end had I fatigued myself with this unhealthy turning of the night into day? To what end had I deprived myself of the comforts of my bed to breathe, in that heat and throng, air the oxygen of which had already been used up by common, stupid, wicked and apathetic individuals? What profit had I reaped in respect of body, mind, or disposition by this hard work? Had I received a single agreeable impression? had I heard a single smart or sensible word? had I felt prompted to a single intelligent utterance? When I reflected upon these last hours, I could not extract anything worthy of notice; I perceived merely a wilderness with a few dried camel bones and distant howling of jackals, a darkness illuminated merely by some perverse phosphorescent glow, a black void in my life. I felt ashamed of the want of courage that had led me to accept the invitation, the yielding to the thought that it would never have done to have offended my distinguished and influential host by a refusal; I felt humiliated when I remembered the undue patience with which I had listened to shamelessly arrogant or utterly shallow remarks, nay, even laughed at them politely, or when I thought of the incomprehensible weakness with which I had even joined in the giddiness of the people and waded in the street-mud of their opinions. All these acts seemed to me subsequently to make me accessory to some punishable crime without extenuating circumstances. I had a regular fit of the blues, which was felt by me so much the more keenly because I had not previously had the pleasure of being intoxicated. And as is wont to happen in such cases, I did not vent my bad temper upon myself, who alone was the real culprit, but upon the others. It is indeed but human nature to seek to make others responsible for the vexation that one has brought down upon oneself. The result was that I tried to soothe my embittered feelings by pronouncing a general sentence

of condemnation on humanity. Genuine clowns, or wild asses, or rogues! Ruminating cattle, or bloodthirsty beasts, or common curs of that breed whose young ones are usually either drowned or given away! A loathing or an abhorrence! And a rascal or a fool, who without the application of any spur ranks himself among this breed and voluntarily howls with the wolves and bellows with the oxen, applauds the delicacy of carrion with the vulture, and pays court to the turkey hen on account of her intelligence!

While dreadful thoughts of this kind were chasing one another in my brain, my glance happened to fall upon my microscope, which had been left standing on my writing-table since my afternoon's work. This apparatus produced an effect on me such as I had never before experienced. The comparison may be thought extraordinary, but the instrument in question appeared to rise up before me as did naked Phryne before the judges at Athens, and say—"Look at me, and then condemn me if you can find the heart to do so!" A voice seemed to speak within me, and with all seriousness and emphasis call me unjust while it began enthusiastically to commend that very humanity which I had just been condemning. How could I dare to charge with stupidity and superficiality that same human race which had succeeded in inventing the microscope! What profound, persevering, and powerful mental effort did even this single instrument represent! It might have been chance alone which first of all taught the effect exerted by a concave lens, or by a convex lens, or by a combination of the two kinds on a ray of light. Nevertheless, it was the human mind that had turned this accidental observation to account and exerted itself in such a way as to draw from it all the fruits which it could produce. The path had to be followed up and accurately determined which the ray of light described through these various lenses, sometimes diverging, sometimes parallel, sometimes converging. The mathematical theory of these phenomena had to be settled. Apparatus of wonderful delicacy had to be constructed in order to scratch lines upon a sheet of glass which would divide up a millimetre into tenths. All this has been accomplished by mankind. And

what is it that they have had in view in expending so much energy and ingenuity? Why, to move the boundary stones of knowledge farther forward, over just a tiny, almost immeasurably small, distance. For that the microscope is capable of performing real services only the utterly unlearned can doubt. And yet what is distinguishable under the microscope, not merely in respect of size but also in respect of importance, falls into the shade as compared with what is visible to the naked eye. The dog is far more remarkable than the infusorium, and the oak tree than the bacterium. A vein is far more wonderful than a capillary vessel, the complex movement of an arm far more astonishing than the simple creeping motion of a little piece of protoplasm, or the Brown's glittering of some tiny inorganic particle of matter, and a human chest with all that it contains much more surprising than a cell and its constituents. The conclusions to which, after a single glance at the external world, we come regarding the various relations between the Cosmos and our Ego are beyond all comparison with those which we can obtain from the most persistent study of microscopical preparations. Of what we really would like to know, namely, how bodies are made up in respect of their inmost nature, of what final, simplest constituents they consist, and how the chemical and vital forces operate, not a syllable is revealed to us by the microscope. The ultimate form which is disclosed to us by even the best of these instrumental aids is the cell, in which a nucleus is discernible by us. We can possibly even distinguish this also, that this nucleus consists of an outer covering with some apparently fluid contents and a little material portion at the centre. At this point, however, alike power of sight and power of discernment fail us. Judging from its action, the cell nucleus must undoubtedly be in itself an extremely complicated piece of mechanism, the construction and operation of which we must understand before we can unveil the mystery of life. Between this just perceptible cell nucleus and its ultimate constituent elements there still intervenes so huge a gulf that in comparison with a the little bit of progress which we are enabled to make by the aid of the microscope, that is to say, from the tissue

which is visible to the naked eye to the cell, is practically not worth notice. It is just as if I were sitting in a room in Berlin, and, wishing to look across to New York, were to open the door so that the range of my vision got extended by the whole breadth of the ante-room. And it was to attain this trifling enlargement of their prospect that human beings gave themselves all this trouble and expended so much persevering labour, thought, and dexterity!

From my microscope my glance strayed to the bookcase, where the first works upon which it fell were those of Sir William Thomson and Professor Helmholtz. I recalled to my mind all that we know at the present day of what are so generally, if inaccurately, termed the mysteries of Nature. Nature possesses no mysteries. Everything that she does is done with kindly openness. Her functions are exercised in the clear brilliance of day, amid the developing of light and stir, and with the accompaniment of manifestations that excite attention. It is our fault, or rather weakness, if we fail to understand what is going on about and within us. Just as careless parents sometimes speak in the presence of quite small children about all kinds of subjects, without the still too undeveloped minds of the little neglected listeners being capable of understanding the substance of the conversation or retaining more than a few disconnected words, so Nature performs all her labours in our presence while we look on with the purblind eyes of children and fail to comprehend, noticing merely now and again some manipulation, some frequently repeated movement, some word, without so much as suspecting what it all means and for what end it takes place. As will be seen, I do not overvalue the extent of our knowledge of Nature. Even the little, however, that we have learned by our observations of our great mother —does it not show in us men the presence of glorious talents! Hundreds, thousands of long years have been spent, ingenuity, memory, the faculty of arguing from cause to effect and *vice versâ*, the power of imagination, have been exercised to a tremendous extent, patience and close observation have been strained to the utmost, the most insidious snares have had to be avoided and the most obstinate habits of thought

have had to be overcome, before the present day standard of our knowledge of Nature could be attained. It is a favourite image of my phantasy, to represent to myself Pythagoras visiting as a famous foreign savant, under the guidance of the professors concerned, the physical and chemical laboratories of one of the great universities of our day. I form a picture in my mind of the thoughts that would pass through his mind, and the interchange of astonishment, reflection, and admiration which would be expressed on his face, when the apparatus should be shown and explained to him by which the rays of the sun and even of the nebulæ can be analyzed, so as to show the chemical nature of their sources of origin, and which enable us to calculate the number of waves per second that there are in a musical note, and the sum total and extent of the vibrations of a ray of light, to measure the rapidity of the course of an electrical current over a copper or silver wire, and to find out the amount of heat which is liberated or becomes latent when two gases are chemically combined or separated. What an extensive prospect would be suddenly opened up to him! What a divine-like enlargement of his intellect would he feel in himself! And yet even this grand old Greek himself knew a good deal and had already formed the idea of endeavouring to find constant simple arithmetical relations explanatory of the phenomena of Nature. How much toil was involved merely in this, the arriving at the surmise that the air which we breathe is composed of several elements, that the simple omnipresent substance water, which was consequently trusted by us and certainly for thousands of long years did not attract any special attention, consists of a combination of two kinds of gaseous matter, and that a musical note is in reality a wave motion, a single colour several thousands or millions of vibrations! For as a matter of fact, if I dissect my sentiments, I find that what does seem striking to me consists far less of those facts which we know than of the impulse that has impelled us to search for them. The men who devoted years of investigation and thought to so homely a substance as water, who, starting with the observation that heat transforms it into a gaseous state, then put the question to themselves whether steam might not itself be

made up of simpler steams or gases—these men were not obtuse nor yet cursory. They did not content themselves merely with superficial appearances. They wanted to go to the root of all things. Or again, the men who engaged in the conspierations of something of so every-day a nature as an impression on the senses of vision or hearing, and recognized this apparently uniform and indivisible impression as a combination of several primary constituent parts—were they mere desultory men of ease who lived from day to day forgetful of all care and anxiety? No, those men were properly behaved. They were profound and great. Their aim was not merely to satisfy their coarser and coarsest senses, but to furnish enjoyment to the finest feeling that we possess, the instinct that tends to truth and knowledge. It is undoubtedly the case that there is a pleasure in discovering a new truth, and probably it is a far more powerful one than can be obtained from any other physical gratification. Archimedes' shout of *Eureka!* "I have found it!" sounds with more triumphant clearness throughout the history of mankind than any cry of ecstasy that has ever escaped from a lover on the first embrace of his beloved, and Newton's speechless dismay, when his cat upset the lamp and set fire to the sheets that contained his most important calculations, involved probably as great a feeling of pain as that felt by Napoleon on the evening after Waterloo. But it is nevertheless a pleasure of quite a different kind from that which can be derived from a good supper, or even a succession of good suppers extending right to the end of one's life, or from that which can be derived from parading in fine clothes, flattering remarks made by one's neighbours at table, so-called conquests and successes in society, and there are nevertheless men out of respect for whom one feels inclined to clasp the hands—men who desire for their life no other contents than the hope of finding some truth, and whose joy and happiness is rendered complete by some fresh advance in knowledge.

Besides the physicists, astronomers, and natural philosophers, the class of mental philosophers sprung up before my eyes as the latter slowly extended their gaze. Fechner, Lange, Wundt, Zeller, Lazarus, Spencer, Bain, Mill, Ribot—

these were the names I read one after the other on the backs of the books that are more dear to me. It was a scene like that in *Macbeth*—armed heads and figures bedecked with crowns appeared before me; a long procession of kings made its appearance from out of the gloom and filed nobly past me, greeting me with a slight inclination of their mighty heads and with favour in their kindly eyes. But instead of feeling as Macbeth did with the witches, instead of feeling an abhorrence at this sight, I experienced an indescribable state of excitement. For these royal personages, these conquerors of extensive intellectual spheres, these leaders of victorious armies in wars against powerful errors, were not enemies but my own proud ancestry, to be connected with whom, however remote even might be the relationship, and to be descended from whom, however lengthy might be the pedigree, evokes a feeling of enthusiasm that defies comparison. And this descent, this relationship cannot be gainsaid. All of us who have any share in the formation of the characteristics of our time belong to the family of these intellectual monarchs, even though it should perhaps be merely as younger sons and without any prospect of succeeding to the highest places; we bear a racial resemblance to those noble, as it were coin-represented, heads; we might show by way of proof that we possessed family treasures, thoughts and opinions, which we have inherited from those ancestors. They have done giants' work in what they have produced for us, and we are now living, almost without thinking it in the slightest degree wonderful, amid known facts the insight into which was acquired in a way that is far more remarkable than all the labours of Hercules combined.

I in my turn did what has already been done before me so often as to have practically become commonplace—prompted by the sight of Lubbock's *History of Primitive Man*, I reviewed in my mind the whole development of our race from its first appearance on the earth down to the present day. What an ascent! What a train of glorious and noble pictures! Those human beings who have left behind their kitchen refuse on the Danish moors, and their skulls in the valley of the Neander, at Cro-Magnon and at Solutré, occupied a

position not much higher than that of the better endowed animals, perhaps not so high as the trained poodle which Sir John Lubbock is endeavouring to teach to read; at all events lower in the scale than the Patagonians, the Bushmen, or any other present prevailing type of human creatures. They were more wretchedly protected against cold and wet than is the naked earthworm, which can at least quickly and easily bore its way into the soil. They were feebler than the large carnivorous animals, slower than the hoofed class, and more inoffensive than the horned graminivorous animals. When they failed to find tree-fruits, they squatted wretchedly on the sea-coast and waited until the receding tide left them for their nourishment all kinds of vermin on the extending beach. But in these poor creatures there survived a something that made them a pride of the earth. These beings alone amid all the various kinds of living creatures known to us did not rest content with their fate, but took the field against the conditions of existence imposed upon them by Nature. Were they not naked? They invented coverings for themselves, from the mythical fig-leaf to the silk and satin robes made by the fashionable metropolitan tailor, which are spoken of as works of art by perfectly serious individuals. Did the rain annoy them? They erected shelters for themselves, from the nestlike tree-dwelling made of interwoven branches to the dome of St. Peter's built by Michael Angelo, and at the same time found opportunities for such absurdities as the umbrella, the Panama hat, and, that caricature of the latter, the undress cap. Did they not get along fast enough? They began by breaking-in horses and attained finally to the Lightning Express, refreshing their minds by the way with the invention of the cab, of the bicycle, and of the bath-chair. Were they weaker than the large animals? Krupp and Whitehead come forward to prove that now-a-days they need no longer have any special fear of their foes. Never standing still even for an instant, ever pressing forward, they got farther and farther, higher and higher, from forming textures of jointed pieces of bark to the mechanical loom, and from the stone axe to the electric accumulator. Each generation has taken part in this work,

each one without exception. One often reads in books or hears it said that mankind appears to have forgotten various kinds of important inventions; that arts and natural forces seem to have been known by the ancient Egyptians, Indians, and Jews which have either become quite lost to us or which we have had to re-discover after having lapsed into oblivion for thousands of years. This is in the highest degree improbable. Such a supposition is the offspring of that same mysticism which has also suggested to mankind the far-spread dream of the "good old times," of the "golden age," that prevailed in the past. It is not true that there are periods of retrogression or even merely stationary periods in the history of humanity. The opposite contention is based upon inaccurate observation and onesidedness. There are to be found in Yucatan in the midst of primeval forests the ruins of considerable temples which reveal a highly-developed architectural skill, while the present inhabitants of that country dwell in huts made of the branches of trees. There wander about in Central Asia nomadic tribes who find shelter under tents of rugs, and yet there are the remains there of extensive cities with stone palaces, watercourses, statuary, and inscriptions. In Egypt the pyramids and gate towers look down upon the mud cabins of the fellahin. The earlier part of the Middle Ages has the appearance of being a decline of the old Græco-Roman civilization. I must not forget to mention that. But what is it that we remark in each one of the cases cited? Merely this one thing, that the race had for a time neglected the desire for luxuries and the means of satisfying them. The beautiful, though superfluous, could be forgotten, the necessary never. Mankind could lose the art of ornamenting their clothing, but never that of clothing themselves after once having cultivated it. They might give up the practice of decorating their roofs with plates of gold, but they would never give up that of preparing some shelter for themselves. The essential acquirements, that is to say, those whose purpose is to overcome the innate helplessness of mankind in the midst of a hostile nature, and consequently those which render the preservation of self easier for it—these acquirements can never be lost by it, but are always

maintained and extended. Cases have occurred of barbarous races overrunning and destroying states which had become enervated and rotten through a high state of civilization. In these cases the cry has been raised about retrogression and return to savagery. But that is unfair. The victorious barbarians in such cases never remain stationary. They go on developing, gaining fresh information either by their own exertions or from those they have subdued. Even those conquered retrograded not because of some impulse in them which prevented their farther development, but because they were forcibly prevented by their new masters from living any longer according to their former habits. I shall believe in the possibility of human retrogression when there is pointed out to me in the whole history of the world a single instance of a people, not subject to any external irresistible compulsion, but continuing in the circumstances to which in earlier times it had been accustomed, ever declining, either rapidly or gradually, from some standard of civilization that it has once attained to a lower one. For such an instance I have sought in vain.

In the case of confirmed despisers of the human race material progress does not, I know, inspire any respect. What does it show, say they, that we communicate now-a-days by means of the telephone and telegraph, or that we no longer shoot with arrows but with repeating rifles? Inventions, no matter how fine and useful they may be, arise neither from the goodness nor yet from any special smartness on the part of mankind. Their origin can generally be traced to some accidental cause, and their improvement is almost invariably the work of the basest motives. The earliest constructor of the steam-engine never thought of lessening the hardship of life for poor burden-bearers or wheel-drivers, but only of enriching himself and acquiring fame. No inventor has ever been content with the consciousness of having performed a labour of love for humanity. He has invariably set himself eagerly to get patents which too frequently impose a heavy tax on this beloved humanity as a condition to its enjoyment of the convenience; and he has been known to make an outcry as if his teeth were being

drawn when he did not deem himself sufficiently honoured, recognized, or remunerated by his contemporaries. Railways and economical machines, therefore, are in no way evidence to refute the shabbiness of mankind.

I do not see the use of stopping to combat these views in detail; I would merely remark—How great has been not only our material but also our mental and moral progress! What an aggregate of generosity, fidelity to principle, and sublimity of sentiment is the history of humanity! Of course, if we choose to do so, we need see in it nothing else except a series of savage wars, brutal devastation, machinations, lies, injustice, and acts of violence. But it is not the fault of mankind in general that writers of history have preferred to lay stress upon the hideous and criminal side of occurrences. These have also a fair side, and that we ought to find out. Amid the most horrible carnage of a battle there may be distinguished glorious traits of unselfishness, self sacrifice, and love of one's fellow-creatures. On the occasion of the slaughter of the Innocents at Bethlehem there were probably mothers who then found the opportunity of lavishing all the treasures of a heart that loved in such a way as to utterly forget self, and I doubt not that there was on the eve of St. Bartholomew no lack of deeds of touching loyalty and admirable heroism. On every page of the world's history gleam the names of martyrs who struggled and suffered in defence of what they deemed to be the truth. At every advance in knowledge, at every step forward blood has been shed, noble, high-minded blood, and that frequently too in streams. And the men who offered it so intrepidly and unhesitatingly, what reward did they expect? Evidently no material reward, for of what use would all the millions in the Bank of England be to the man, the connection between whose mouth and stomach had been interrupted by the severance of his gullet? And not even a reward of an intellectual kind, not even fame among posterity, the prolongation of life in the memory of mankind, for many a great deed has been performed in secret, unobserved by prattling witnesses, seen only by the inward eye of the hero, which became closed for ever when the sacrifice was made

complete. It was not for their personal material good that the champions of thought contended, but for a treasure so fine and noble that it requires a mind of the highest order to appreciate it—the right, namely, to breathe in an atmosphere of truth, to regulate their actions in harmony with their opinions, to give utterance to the least thoughts of their inmost souls, and to allow all men to participate in any newly-discovered advance in knowledge.

Surely too I am not called upon to adduce by way of example the tragic life of martyrs. The beauty of humanity has certainly not been revealed simply amid the flames of the stake and on the stage of the scaffold ; it is to be found, more modestly arrayed it is true, yet just as visible, at all times, in all places, and in the midst of us. Our everyday life is interwoven and penetrated with it. Our culture bears traces of it both in its greatest and in its smallest details. For, just picture to your minds the kind of sentiments out of which has originated the decision to found a hospital, where poor persons will be tended when in a state of disease ! Or take the case of a loan establishment where needy individuals can borrow at low rates of interest ! The men who founded these institutions were as a rule persons of wealth, living and dying amid superabundance, without personal experience of necessity or destitution. No reproach could certainly be cast at them if they were to confine their attention to the scenes of luxurious existence that were familiar to them, if cases of misery which they had never seen found no place in their thoughts. They went out, however, beyond themselves. They sought for what lay far from them. They took upon themselves the trouble of picturing the sufferings of strangers. Seated at table as men of wealth, they put to themselves the question, what frame of mind must have been that of Lazarus outside the gate, and as they played with their gold pieces they tried to imagine what sort of existence it must be to be without sufficient money wherewith to buy bread for their little ones even at market prices. Is not this sort of thing noble, is it not unselfish ? It is true, no doubt, that thoughts of kinship may have played some part in influencing their ideas. The

first person who cared for the sick and the poor may have been unconsciously prompted by this idea—"Even I may some day be poor and ill, in which case the hospital or the loan establishment would for me as well be a benefit." But surely it can hardly have occurred to any one, at all events in Europe, where but little faith is manifested towards the doctrine of the transmigration of souls, that even he might some day become a hound or a nag, and yet societies for the protection of animals and homes for lost dogs have been instituted, and the royal mantle of human compassion has been thrown over the unreasoning brutes. This general benevolence, which includes even animal suffering among the objects of its attention, seems to me worthy of respect even when manifested in the anti-vivisection movement. As to this last, those persons with whom it originated are in truth from an intellectual point of view hopeless dullards, for they display so perfect an incapacity of comprehension and judgment that the right ought to be unconditionally taken from them of joining in discussions of a political or municipal nature, or even of managing their own possessions. So far as their sentiments, however, are concerned, no criticism need be directed against them. They have a heart for such sufferings as they are able to see or imagine. They act from a feeling of sympathy which, though it may be an idiotic one, does not seek to benefit them in their own persons.

We thus see that we are on all sides surrounded by exalted and touching exhibitions of virtue on the part of humanity. Everything thus speaks to us of great and noble qualities possessed by man; every invention, for example, speaks of his ingenious mind and his skilfulness, every science of his talent for patient observation and his earnest, instinctive desire for truth, every fact in the history of morality of his unselfish goodness of heart and his loving regard for his fellow-creatures. Not to be numbered are the mighty spirits and profound minds that have lived before us, and are still living among us, and the whole contents of our existence, of the world of our thoughts and sentiments as well as the comforts we daily enjoy, are composed of the fruits of their toil.

The devil's deputy never loses his rights. Even at this point he checks the lofty flight of my enthusiasm for humanity, and with a grin interpolates this remark—That's all very fine; great minds have always existed and will probably always be to the fore; but are these not the rare exceptions? Is the average majority on that account the less mean or common? Are not the former always persecuted and warred against by the latter? John Huss and Arnold of Brescia, were they not so treated? Could not the crowds that stood around their stakes and saw them roasting to their edification be numbered by thousands? And Galileo too, was he not forced by dozens of cardinals under threat of the rack to retract his views? The progress of human development seems to you to be as it were an uninterrupted forward march with an extended front and solid phalanxes. That is merely one side of the picture. I see the other side. I see a series of animal-tamers who would force gentle manners upon a dastardly bloodthirsty beast; the wretched creature thinks of nothing else except to destroy its subduers, and is only restrained from doing so by the whip and the pistol and its own stupidity and abjectness. It is, I suppose, superfluous to add, that this beast is mankind in general, and that its subduers are the great minds of all ages.

This discourse of the voice within me aroused again for just an instant all the sensations of disgust that had affected me on my return home from my evening party. I was very near acknowledging the justice of the argument of the devil's deputy. But there before me was still the microscope, there still gleamed on the backs of my books those illustrious names—no, his argument could not be just! It is an orator's trick to divide mankind into a large herd and a few keepers. It is wrong thus to represent a few special intellects as the only impellent force, the masses as the perpetual obstacle. In this error even I for a long time shared, that I must admit. I used to be of opinion that the entire white race of man might be thrown back to the standard of the Middle Ages, or even still farther back, if only their heads were struck off the ten thousand more conspicuously clever of my contemporaries, who seemed to be the sole real upholders

of our civilization. Now, however, I no longer hold that view. The superior qualities of humanity are not the exclusive inheritance of a few who form the exceptions, but fundamental attributes which are evenly distributed throughout the entire mass of the race, just as are the organs and tissues, just as are the blood and brain material and bones. No doubt, in individual instances there are more than the average, but in every case there are some. What a pity that the experiment cannot be tried! On theoretical grounds, however, I can suppose to myself the following case. Take a number of the most ordinary, average men, without any special intellectual training, without professional knowledge, persons who do not possess a more intimate knowledge of anything than is obtainable from a hasty perusal of newspaper articles or public-house conversation, and suppose these to be shipwrecked and cast upon a desert island and so thrown permanently upon their own resources; what form would the fate of such Robinson Crusoes assume? At first they would come off worse there than the savages of the Southern seas. They would never have learned how to turn their natural talents to account. They would be unaware that it is possible to take meals without these being served by waiters, that articles of food are to be found elsewhere besides the stalls of markets, and that the necessary hardware can be provided in other ways besides going to the retail shops. This state of matters would not, however, endure for any length of time. They would soon find out how to help themselves. They would in the first place make discoveries in themselves, and in the next place important inventions. They would notice that in the one a great technical skill existed, in another a philosophical talent, and in a third an organizing capacity. They would in the course of one or two generations repeat of their own accord the whole history of the development of mankind. All of them must have seen steam-engines, though none probably would know very accurately how such a machine is constructed, and they would soon therefore by the exercise of personal reflection get at the root of the matter and make one for themselves. All of them too must have heard tell of gun-

powder, though none probably would know very accurately the proportions in which its ingredients are combined ; nevertheless they would very soon prepare for themselves serviceable gunpowder. And so would it be with all instruments, attainments, and accomplishments. These individuals, who would at home infallibly be regarded as the most ordinary rabble, would prove to be in reality veritable little Newtons, Watts, Helmholtzes, Graham Bells. Amid the circumstances of our civilization they lacked that opportunity to develop themselves which the desert island afforded them. Civilized life required of them nothing except bounce and stupidity and some ready money. With the last mentioned they bought what they wanted, and were unable to get on credit, and bounce and stupidity they supplied in plenty. Necessity compelled them to seriousness, profoundness of thought, invention, and, lo and behold! these qualities also they supplied, and that too in such a quantity as would have sufficed to make a great man in any European capital. Popular sagacity has long remarked that men become known at their best in time of war or on a journey. And why? Simply because in such cases they do not glide along in accustomed tracks, because in order to become fit to grapple with their circumstances they have to turn out all the intelligence that they may chance to possess in their inmost being, and because as a rule under this constraint they actually reveal qualities which but for that one would never have imagined to exist in them. It would not take much to make me believe that in every normally developed man there is an endowment which would make a great promoter of civilization. He has only to be forced to become one. It is just in the same way that roots may be formed from the top branches of a tree, if the latter is only planted topside downwards in the ground, and its leafy twigs are in this way compelled to drink in their nourishment from the soil.

My evening party now presented itself to me in quite a different aspect. I no longer saw foolish girls and silly men, egotists and blockheads, vulgarity and vanity, but merely talents as yet unrecognized, Brutuses who simulated idiocy,

great men who would be able to restore the whole of our present and future culture, in case from some cause or other it should happen to be destroyed. A profound love and admiration for all humanity became instilled into my heart, and as a matter of fact endured until—I again mixed with my fellow-men.

IV

SUCCESS

WHAT is it that is the ultimate aim of scholastic institutions, of all instruction and of all education? Manifestly, to make life more agreeable by deepening, enriching, and beautifying it, or in other words, to increase the well-being of the individual as well as that of the community. There can only be one opinion on this point. Those pedagogues who seem to hold a different view as to the sphere of the school simply fall short of its farthest aim, stopping by the way. Thus it is sometimes said that the purpose of the school is to form the character. What now does that expression mean when it is thoroughly analyzed? The character surely is formed not for the sake of its own beauty or to please the eyes of a few connoisseurs, as, say, a bronze bust is cast and chased, but with a view to some useful effect! A perfect character, that includes steadfastness of purpose, perseverance in undertakings, inflexibility in regard to convictions, loyalty to inclinations, and fearlessness when hostilities are necessary, is considered as a good safeguard and weapon in the struggle for existence; it is presumed that it renders more easy the victory over one's competitors and opponents, or, even if it should please the gods to allow an unrighteous cause to triumph, and the righteous cause has to cure the sting of its defeat with the thought of Cato's approval, that it nevertheless affords to the vanquished the satisfaction of being quite content with himself and even proud of those very qualities which conduced to his defeat. Or again, it is said, the purpose of the school is to form the mind, to strengthen the will, to develop the taste for the good and beautiful. What idea underlies all this?

The intellect is formed that man may with its aid comprehend the phenomena of Nature and society, that he may by means of it enjoy the satisfaction of understanding the nature and elements of many things, at least, that is, up to a certain point, and that he may by its help learn to avoid dangers and reap what is to his advantage; the will is sought to be strengthened that all manner of noxious things may by its aid be kept away from the individual; the taste for the beautiful and good is developed that thereby delightful impressions may be produced upon the consciousness. To what then tends all this? Why simply to this, to make existence more agreeable to the individual.

Now does the school with its present systems and methods of work fulfil this purpose? I say no. Nearly all men strive after one single aim, namely, external success in the world. Without success life cannot possess for them any delight. If any one should pledge himself to shape existence in a more pleasing way for them, they can understand by this nothing else than that success is to be made easier and more certain for them. Should this conception not become realized then they feel themselves sold and deceived. That is the point of view of nine hundred and ninety-nine men out of a thousand. And perhaps in reality the number of those who demand of life anything else besides external success is even less than I here assume. The school, however, prepares for almost everything except success, that only source of happiness and contentment for an overwhelmingly great majority. The ideals of the school system are perfectly separate from those of life, nay, even opposed to them. The entire scheme of teaching and training appears to have been devised with the object of forming men who amid the bustle of real life very soon attain to hatred of the world and mankind, who filled with loathing flee from the struggle for political and social prizes to a peaceful and chaste contemplation of self and an intuition of sublime visions, who, in a word, are expected to resign without a struggle to others, to the vulgar, their place at the banquet of life. This is the gist of the whole matter. It is as if the school system had been invented by cunning persons who had in view to keep the best morsels for themselves and those like them, and to

destroy in advance from the first the appetites of good, vigorous stomachs whose future hunger might be dangerous to them ; it is as if the teachers saw in their pupils rising competitors, and tried to render them harmless from the first by paring their nails for them, filing their teeth, and tying blue spectacles in front of their keen deceitful eyes. The school prepares people for the struggle for existence exactly in the same way as, say, a drill-book would prepare a soldier for war if it taught him that his weapons were simply for the purpose of being left at home; that he ought to refrain from replying to the enemy's fire by firing in return; that his duty is to resign to his adversaries any good positions which he may have chanced to have occupied, and that in particular it is far more glorious to be put to flight than to gain the victory. Many persons will regard such a system of rules as senseless; the enemy of course would, on the other hand, be highly satisfied with it.

The success of which I am here speaking can also be paraphrased in the same way in a few words. It implies the attainment of a position of prominence in the eyes of the majority. This aim may of course be reached by many paths. Prominence in the eyes of the majority is gained if one has a lot of money or acts as if one had ; if one can show off his name like a precious stone in a valuable setting of titles ; if one can make his breast a lively mass of colour with ribbons and stars; if one possesses power and influence; if one is able to bring the city or the country to the conviction that he is a fairly superior, or wise, or learned, or virtuous man. The reflex effect of such prominence upon the individual so distinguished is likewise of a manifold nature. It is material or intellectual, or both at once, generally with a preponderance of one or the other element. The masses possess the good habit of expressing their estimate in the shape of acts. The eminent physician gets many patients and receives magnificent fees. The notable author throws off his books in numerous editions. If a man becomes successful, the result generally is that he is enabled to earn a good deal of money and to acquire for himself all the comforts that are to be had in the way of Mammon in this vale of lamentation. One man

under such circumstances thinks of pheasants and truffles, another of champagne and Johannisberger, a third of ballet-dancers, and some crank or other perhaps even of the relief of the poor who are ashamed to beg. But there is no necessity for us to trace out the devious paths of individual inclinations. The non-material advantages of success are of a different kind, and although, to make use of a popular expression, we cannot purchase anything with them, they possess nevertheless in the eyes of most persons a high degree of value. Strange self-contradiction of human nature! The grocer esteems these advantages in others so little that he will not advance on the security of them a single baglet of ground pepper, not even if the latter were adulterated with olive-stones; but he will make on their account the greatest sacrifices of time, patience, eager striving, nay, even money, sacred, dear money. And this is what they include—that one is saluted on the streets; that the newspapers from time to time make mention of one, and that too, if he belong to the higher degrees, with the accompaniment of complimentary adjectives. They assume in the various classes of society and occupations different forms. Special notice by the sovereign at a court ball; exhibition of one's photograph in the shop-windows; duty calls paid by foreign excursionists; requests for loans on the part of bold confident strangers; a certificate granting one the freedom of the city; deference on the part of the waiters in frequented places; requests to join in contributing to memorials to famous soap-boilers; polite invitations to lunch or dinner at grand houses; these are a few examples of the non-material yet inwardly longed-for gratifications which success as capital yields by way of interest. The fact that I reckon invitations among the non-material advantages of a position of prominence is not the result of a mistake, but is done with all deliberation. For the essential elements in them are not the proffered victuals, but the honour thereby shown. The victuals have merely a symbolical significance, and moreover will have to be paid for with Christmas presents, to their full value at a liberal estimate; the honour, on the other hand, is pure gain and is only esteemed as inferior to the menu by vulgar-minded natures.

Let us now consider whether school equips our youth for the struggle after success or even furnishes them with so much as the elementary principles of the art of acquiring the above enumerated material and ideal gratifications. Against the national schools there is not much to be alleged; that may be conceded at once. At the early age at which children attend these, nothing very serious can as yet be done with them, for the accomplishments which enable one to make his way in the world presuppose a certain amount of intellectual development and some degree of maturity. In the national schools children learn reading and writing and arithmetic, all of which, especially the last mentioned, are certainly of use. To be able to calculate is of considerable advantage both in the way of giving and, though to a less extent, also in the way of receiving, and writing and reading also are generally beneficial, if one is so fortunate as to know the limits to the use of these arts as well as how not to misuse them. The universities likewise may to some extent be allowed to do satisfactory work, for unions and associations afford the opportunity for the development or acquirement of some important talents, such as, for example, the power of attracting to oneself the attention of those in the same or in higher positions in life by brilliant discourses and versatility of attainments, or that of hitting the prevailing currents of taste and of allowing oneself to go along with them, or that of paying court to influential persons; or again, attentive observation of what affects the assistants, tutors, and professors, will likewise conduct the talented youth to certain advances in the way of knowledge that may be of great value to him in his after life. On the other hand, the high schools unfortunately do not regard students' societies as of the greatest importance, nor do they confine themselves to the endeavour to produce educational results by the example of academic careers; they even torment the young with lectures and exercises, with recitations and laboratory work, all of which sort of thing seems to me of very questionable practical value for the advancement of students. The gymnasium[1] finally is not worth powder and shot. It does

[1] In Germany, gymnasia are preparatory schools for the Universities.

not in the least degree benefit the future citizen entrusted to it. On the contrary, it makes him rather the more unfitted for the struggle after success in life. It means a grievous waste of the most valuable period of life. I would ask, what practical advantage can a youth derive from being nurtured upon Horace and Homer? Will that enable him later on to comprehend with the greater ease poetry of the rumbling dung-cart style? Or again, what benefit will accrue to him from the enthusiasm that he may have worked up over the Iphigenia? Will that put him in a position to prate learnedly about the Beggar Student? The proposition, *Pro patria mori*, is sought to be instilled into him as the ultimate sum and substance of history. Is this high-sounding saying, however, of any use as a guide to the proper way of addressing the Lord High Chancellor? In short, however susceptible may be his frame of mind, the student learns absolutely nothing of what he might later on turn to account, nor will he be able to turn to account anything that he so learns.

There exists thus in our scholastic course a sad void which really ought not any longer to remain unfilled. I cherish visions of a school that will profess expressly to prepare simply and solely for success in life, and not affect to serve all kinds of abstract ideals. Certain it is that in our days there are also men who, though they have not had the advantage of such institutions, yet attain to success. That, however, does not constitute the slightest argument against the propriety of my idea. In the dark ages of barbarism, even in countries which possessed no kind of scholastic institutions, there were isolated and exceptional learned individuals, who acquired their knowledge without any guidance or outside aid, entirely by their own diligence. But how troublesome is it to learn in this solitary manner! What a lot of time is unnecessarily and uselessly wasted under such circumstances! To what errors is one exposed! How imperfect and partial is the product even in the most favourable cases! A master, on the other hand, smooths the way for one; educational conservatism is a safeguard against aberrations and whims. Those persons who have in an

autodidactic fashion worked their own way to success must, when they turn themselves about at the goal and survey the path they have traversed, recognize with regret how many deviations from the road, how many steep climbs, and how many exhausting sandy and swampy places they might have been spared if they had possessed a skilful guide or some knowledge of the locality.

There is one proviso that I would place right in the foreground—classes for girls would have no place in my school for success. Woman is in the happy position of not requiring any instruction in this science. She is endowed by Nature with all the knowledge that is required by her in order to obtain success in life, and the lesser arts that may not perhaps have been born in her she acquires later on entirely without assistance. According to the prevailing arrangements in the world, by far the largest number of women confine their efforts to one form of success—they seek to please the men. In order to attain this end, all that is required is that they be pretty or have something striking about them. There are misguided minds who have hit upon the infelicitous whim of founding colleges for the higher education of women. In these the poor creatures are taught drawing, drumming on the piano, murdering foreign languages with an absurd accent, and confusing historical dates; that is to say, just those very things that later on will make them objects of horror to the men. The scheme of such establishments can only have originated in the brains of pining old maids or vindictively disposed married cripples who are used to being thrashed by their wives. It displays a perfect ignorance of the true life-aims of women. The Orientals in their primitive traditional sagacity regard matters from a far more rational point of view. Among them the girl learns nothing beyond singing, dancing, playing the lute, telling stories, dyeing their nails with henna and the edges of their eyelids with kohl; that is to say, the arts that make them objects of desire in the eyes of the men, which afford them the opportunity of displaying their charms in the most favourable light, and which will fascinate their male partners in life and permanently attach these to them. Our poor girls

of the West are, in consequence of the prevailing system of education, artificially prevented from giving way to their instincts, though this would promote their interests with much more certainty than all the spectacled and unspectacled teachers in their institutions. It is only when they have left behind them for ever the absurd hardship of school-life that they become able freely to follow their natural impulses and develop themselves as they were designed to do. Then of their own accord they acquire the art of painting with rouge or even of doing themselves up with rice-powder, of wearing a bold style of costume, of walking, standing, and sitting in such a way that what gives offence in the cut of their clothing becomes most specially prominent; then of their own accord they attain to the art of playing with their fans in the most expressive ways, of causing their eyes to roam about in an inviting manner, of indulging in little airs, charming gestures, and sweet dainty little pouts, and of giving to their voices the delightful modulations of childish innocence, youthful trickery and piquant ignorance. With such aids they are sure to gather about them wherever they may appear a host of admirers, to secure dancing partners, enthusiastic followers, a husband and all the rest; in short, to obtain everything that makes life fair or agreeable. Married women will of course turn up their noses at them, and on superior and nobler members of the male sex they will likewise produce a repellent rather than an attractive effect; the latter will feel that grease, patches of paint, flour, and daubs of all sorts are no more in their proper place on a woman's face than, say, on a velvet dress; that padded shoulders and huge bustles cause a woman to appear humpbacked and consumptive-looking or like a Hottentot, and that coquetry and love of ornaments convert even the prettiest creature in the world into something insufferable. But what matters it to the woman if she is subjected to these criticisms? At the hands of her own sex she does not expect any kindly feeling; even if she received this it would not mean anything for her. And so far as her male critics are concerned, it would be to her in the highest degree a matter of indifference if some pedant did turn his back upon her with disapproval, so long

as the young gentlemen of the Jockey Club fixed their eye-glasses upon her in token of appreciation. She cannot possibly bring her nature and conduct up to the standard of the man of taste. The latter is a phœnix. Many women live and die without ever having fallen in with such a man. It is only the Sleeping Beauty in the Wood of the fairy tale that is so fortunate as to possess a knight who comes and releases her. In real life it would be folly to reckon upon such a hero, and any girl that buries herself behind a thorny hedge has every prospect of being left neglected there. Woman, therefore, exhibits great shrewdness in seeking to make herself agreeable to the mass of men without heeding the undiscoverable phœnix.

But though a woman can, as a general rule, make shift for herself without any special theoretical training for success, a man usually is in a less fortunate position. In order to make his way in the world, he has to please individuals of his own sex, which is by no means so simple a matter as the producing a good impression on members of the other sex. Of course in a few isolated careers the man enjoys the same advantages that the woman does; that is to say, he can produce effects with his personality and may confine himself to pleasing the ladies. Take for example the cases of the youthful admirer, the tenor singer, or the salesman in a fancy goods establishment. Men of this order do not require any school for success. If Nature has treated them as a mother should, they will stride ahead without the aid of any theory and as if propelled by steam. The best instruction, unfortunately, is incapable of producing a graceful curled moustache, and even when the hair is parted in so artistic a way as to communicate a special charm, yet must the hair-dresser have before him a sufficient abundance of hair if he is to be in a position to successfully manage his priest-like duties. An Apollo Belvedere in flesh and blood, even though he be merely one of those unscarred warriors of the Palace bridge at Berlin, does not require to make his getting-on in the world a cause of anxiety. If a fusileer he will soon get moved up from the kitchen to the chamber of his employers; if a footman or a coachman he will be in brisk demand; if a

waiter he will make the fortune of his hotel as well as his own; if a stage-walker or a member of the chorus he will have his choice of the daughters, and very likely even to some extent of the mothers of the country. Doubtless, however, he will do better, in order always to avoid unpleasant disappointments, not to make tracks at the start towards marshalships and dukedoms, for at present there are no Catherines occupying the more respectable thrones of Europe; a reasonable or solid ambition, under the circumstances assumed, is certain to be fulfilled. Such a favourite with the women would only detract from his reputation, if he tried to add intellectual excellences to his already existing physical ones. It would be a pity if he were by much reading to destroy the lustre of his eyes. By his culture, by his shrewdness, he might overawe his fair admirers and put them under a constraint which would make it more difficult for them to take an unreserved delight in his appearance. To be as fine-looking as a Greek god and as stupid as a pond carp would constitute for one a Mahomet's Paradise upon earth, with the houris and everything else besides that makes it complete according to the orthodox view. Individuals who are thus endowed require a school training just as little as does a man of genius.

The man of genius, however, is the rare exception, and human institutions are calculated so as to suit the average phenomenon. A Beethoven, even without any training in a school of music, would become what he was destined to become, but choir-boys of the everyday type have to be tied down to the drudgery of the counterpoint, in order to qualify by and by for, it may be, the post of director of a musical band with the privilege of a retiring allowance. We can therefore leave out of the game all the categories of exceptional phenomena—the Apollos, the higher aristocrats with really good incomes, the sons of millionaires; these do not have to run after success in life, success runs after them. My school for success is simply destined for the wretched crowd that is born without titles and dividends, but still in spite of this fact entertains visions of noble sources of revenue and decorations of the Red Eagle class. These

mediocre men would undoubtedly enter upon the struggle for existence with much more hopeful prospects were they systematically trained how to find their way through the perplexities of real life.

If my school for success were but established, its director would in perfect sincerity have to quicken the conscience of every father who desired to entrust a boy to his care with this little harangue—"My good man, will you please start by clearly explaining what it really is that you want. If your purpose is that your son should pass his life in an ideal world, in which merit alone receives the garlands of honour, modest virtue is sought out in its place of concealment and rewarded, stupidity, vanity, wickedness are unknown, and the good and beautiful prevail all-powerfully; or again, if you believe that your son will always place self-respect above the applause of the multitude, listen only to the dictates of his own conscience and not in the least to the opinions of the market-place class, and at the same time find satisfaction in doing his duty and in being praised by his inward monitors, then he need not come to me for instruction. In that case your better course would be to send him to some other school that is to your liking, and allow him to be educated in the old jog-trot way. Then he will get poets both ancient and modern to read, be allowed to amuse himself with the sciences and learn to swear by what his teacher tells him. If, however, your wish is that your son should become one of those men whom people salute on the streets, who travel in drawing-room cars and put up at hotels of the first rank, if your wish is that he should possess money and influence and be able to despise obscure, pinched individuals, then let him come here. That he will some day find a place in Plutarch, I do not guarantee; I can, however, vouch for this, that you will sooner or later find him in one of those good positions that entitle to mention in the official handbook."

My school for success in life would, just as is the case with the schools of abstract knowledge, naturally have to be divided into various grades, lower as well as higher. Just as every one who is sent to school does not aim at a university standard of culture, or a professorship, so every ambitious

fellow will not become a statesman or a millionaire. Many content themselves with more modest aims, and therefore require only an elementary instruction. A graduation of the school into popular, intermediate, and higher departments would consequently be proper and necessary. The popular school would be devised for those who intend to devote themselves to the more common occupations, handicrafts, trades, and the like. Into these merely one single fundamental maxim would have to be instilled, that, namely, which popular sagacity found out long ago, that "Honesty is the best policy." This sounds somewhat Machiavellian, but it cannot be varied—it is and always must be a fact that in the humbler occupations a man will best commend himself by carefulness and reliability. The shoemaker who makes boots well and worth the money, and the grocer who sells real sugar under that name and not sand, will make their own little, modest way in the world and be happy, if they have no more ambitious desires than to win to themselves the good-will of their customers and their daily meat and vegetables. The same popular sagacity is also, it is true, of opinion that "puff is part of the trade"; but if the whole matter is taken into due consideration one cannot fail to be put on his guard against this view. The relations in which a tradesman stands are too simple to admit of recourse to charlatanry. Even a stupid man sees all too speedily through lies, shuffling and swaggering, and becomes shy. In these careers success is really the reward of solidity, for every one is capable of forming a true estimate of these things. If one's coat is too tight or too wide every one notices it; if a bedstead won't hold together the fact is observed by even a more or less obtuse-minded individual, and in all but a few social circles in Saxony a mixture of coffee and chicory will not fail to give offence.

In regard to the higher callings matters stand on a different footing. Whoever selects one of these requires a more protracted and more careful preparation for success, such as might be imparted to him in the intermediate and higher schools. There the aim would be to imbue the pupils with a few fundamental principles that are completely different from

those in which the ordinary system of education tries to make us believe. Common sayings of the populace would have to be carefully regarded, for they frequently enclose a large kernel of truth. Take for example the ingenious, if also ungrammatical, couplet—"Modesty's a noble dress, yet without it there's more success." This is a golden rule that cannot be sufficiently taken to heart. As a matter of fact, to success in life there is no greater, no more dangerous obstacle than modesty. You may have the highest merit, be gifted to the utmost extent and be capable of the most difficult and useful accomplishments, yet if you are modest you will never see any reward for your labours. It may be that some day or other a memorial will be placed over your grave, but even that is uncertain; during your sojourn on earth, however, you will get neither money nor honour. Modesty means lingering by the door and letting others get the front seats; advancing with hesitation towards the table after the rest have appeased their appetites; waiting for morsels to be offered to one instead of requesting these, commanding them, wrestling for them. Whoever adopts this foolish manner of acting may rely upon being left standing by the door, upon finding the table already cleared, upon nobody offering him any morsels. "One should carefully avoid such bad taste as to speak of himself." What nonsense! The contrary is the correct thing—speak always, speak exclusively, speak systematically about yourself. Don't put yourself out in the least because it does not entertain others. First of all, it interests you. In the next place, you prevent any one else, and perhaps a rival, from being spoken about so long as you have the ear of the assembly. Lastly, something of what you happen to say will always remain fast, even in the most reluctant memories. Naturally you will possess this degree of elementary wisdom, only to say about yourself what is favourable. Do not impose on yourself in this respect any restraint or any limitation. Glorify yourself, praise yourself, commend yourself, be eloquent, inspired, inexhaustible. Bestow upon yourself the noblest adjectives, extol whatever you are doing or have done to the seventh heaven, illuminate it affectionately from every side, ascribe special merits to it, declare it to be the most

important production of the century, assert that the whole world holds it in admiration, and if you find it necessary, repeat flattering opinions concerning it that may have come to your ears or that you may yourself invent. You will see what great success you will meet with if you follow this method. The wise individuals will laugh you to scorn or be shocked at you. Why need that trouble you? The wise are a diminishing minority, and the prizes of life are not distributed by them. Your opponents will likewise reprehend you. So much the better for you! You will forestall them, declare their utterances to be the expression of envy, and bring forward the existence of this last element as a fresh proof of your greatness. The vast majority, however, that is to say, the multitude that commands success, will believe you, repeat your own opinion about yourself, and concede you the position which you have arrogated to yourself. This effect is assured to you in consequence of the cowardice and imbecility of the multitude. Their cowardice brings it about that they won't trust themselves to contradict you, to thrust you back to your proper place, as it is customarily put. You will be accepted as you are, your impudence will be made to count as one of your peculiarities, be noticed perhaps incidentally, and then enter no farther into their thoughts. If you should chance to be invited anywhere, the hostess will say—"This is a person who advances extraordinary pretensions. Too much fuss can't be made of him, too much respect can't be paid him. What ought to be done? I must make him sit beside me on the right, otherwise he may have cause for feeling affronted and go away from the house offended." Should the party happen to include a modest individual of real merit, who, properly speaking, ought to have occupied this place, the latter is quite calmly told—"You won't object, will you, to my giving him the preference? You are of course superior to such trivialities"—and it ends up with your capturing the first place; you have made people accustomed to reserve it for you, and after a time no one will so much as even let the idea enter his brain that it might be otherwise. The imbecility of the multitude is the second circumstance which vouches for the expediency of your self-exaltation.

Only a very small number of persons are in a position or accustomed to distil a proper opinion out of the raw material of facts, that is to say, to make a note of impressions, to narrowly observe matters of experience, to compare them, to find out their meaning, to mentally digest them and to attain to some logically founded original view regarding them; on the other hand, all persons are able to repeat a word which may have been uttered in their presence. It is for this reason that the ripe judgments of others are accepted by the multitude with joy and confidence. It does not affect the matter in the least if these judgments are utterly false, if they happen to stand in the most flagrant contradiction to the facts. In order to take note of this, the multitude would as a matter of course themselves have to be able to establish the facts and logically estimate them, and this power they by no means possess. Not long ago I came across a remarkable instance of this. I had to prescribe mead for a little child, and directed a teaspoonful of it to be administered to it from time to time. Half-an-hour after my visit to this little patient, its mother burst like a bombshell into my room, and while still in the doorway called out in a state of breathlessness—"Oh, doctor, my child is dying! It had hardly taken a few drops of that diabolical medicine within its mouth, when it became quite black in the face, began to choke in a dreadful fashion, and seemed on the point of suffocation. Oh, how could you give such a drug as that to the wretched child!" To me it was at once evident that the child had let the medicine go down the wrong way, nevertheless I rejoined with a sullen air—"Yes, that is no surprise to me. When so powerful a remedy as mead is made use of, these effects follow as a matter of course." The woman wrung her hands and again went on—"But how can people use so powerful a remedy——" "Do you know of what mead consists?" I interrupted. "No." "It is a mixture of honey and water." Her face assumed such an expression of dismay as might have been expected had I said—"Of sulphuric acid and rat poison." "You can understand," I went on, "that when such powerfully acting materials as water and honey are administered——" "That is true," she groaned, whilst her whole bearing be-

tokened grief and bitter reproach. Just as this woman acted, so does the multitude assume everything that is said to it to be literally correct, and repeat it in all faith, without distinguishing truth from falsehood, or seriousness from fun. It is to this that whole nations owe their renown and precedence in the world. In reality they possess every wicked and base quality, yet they give out that they are endowed with the finest and noblest. They are envious and call themselves high-minded, they are engrossed with their own interests and call themselves unselfish, they hate and despise all foreign nations and extol themselves for their universal brotherly love towards humanity; they set themselves in opposition to every movement of a progressive kind and maintain themselves to be the hatching-houses of all new thoughts; they have lagged behind in every department and constantly reiterate that in all respects they stand at the top of the tree; with their hands they enslave and oppress weaker nations, rob them of their liberties, violate the sacred bond of the obligations they have entered into with them, and yet by word of mouth they proclaim all the while the finest principles of justice. And the world does not take the trouble to look at the facts, but simply listens to such words and repeats them in all faith. It takes no note of the fact that the hands contradict the lips, and is convinced that the nations in question really are all that they give themselves out to be.

No modesty then, my boy, if you want to cut a figure in the world. Humble yourself, and others will humble you. Yield the precedence to some other, and the spectators will be convinced that it is due to that other. Call yourself unworthy, your achievements of no importance, your merits as overvalued, and those who listen to you will make all haste to spread your judgment of yourself abroad without reference to its source. I must not, of course, be understood to say that modesty is under all circumstances to be thrown to one side. The time may come when it may be hoisted aloft without harm, nay, actually with advantage. That is, when one's aims have been completely fulfilled. Whenever you have attained to a position that commands recognition and

is indubitably first, and when your rank is so surely defined that no one can entertain any doubt as to the place that is due to you, then you may play the part of the modest man. In such circumstances always remain near the door, you will not fail to be escorted in triumph to the platform ; be sure with all confidence to decline compliments, they will not fail to be revived with eagerness and emphasis ; be sure to speak without anxiety about your littleness, your decorations and your embroidered frock-coat will not fail plainly enough to contradict you. You will not detract from yourself, but will rather have this advantage, that people will be affected and enchanted with your virtue.

You have now learned that appearance is far more important than actuality. Drink as much wine as you please, but preach the benefits of water. This sort of thing is edifying, even when your nose is on fire, like some uncanny will-o'-the-wisp, and your legs are not able to carry you. Even if, while you are declaiming Pindar's Ode in praise of water, your lips are faltering under the influence of delirium tremens, you need not put yourself about. Your congregation will take it for emotion, and will feel all the more reverence for you.

Another fundamental precept is this—don't allow yourself to become of a kindly disposition. That sort of thing will not bring you any good result. Your opponents will despise you, your enemies mock you, your patrons consider you tedious. No one will have any consideration for you, for it will be said—" Ah, that N., who is so good-natured, if his toes are stepped upon he will politely and smilingly beg your pardon." Short-sighted, foolish advisers will probably tell you that it is clever policy to speak well of all the world, as by so doing you may disarm possible adversaries. Don't on any account imagine any such thing. The contrary is the truth. If no shooting in return is to be feared from you, you will just be the more cheerfully shot at. You must be as malignant as a witch and have a tongue as venomous as that of a snake. Your words must be as sulphuric acid and leave a nasty hole wherever they alight. Any name that has escaped from your mouth must have the appearance of having been kept for the space of a week in a bottle of vitriol. Make

yourself dreaded and do not worry yourself about the fact that at the same time you are making yourself hated. The faint-hearted, who, as has already been explained to you, form the great majority, will treat you as savage races treat a mischievous divinity—they will caress you and sacrifice to you in order to keep you in a good humour; the others will very probably pay you back with the same coin. But just consider what an advantage you enjoy, since to the hostile utterances of some one you may have blackguarded you can with a shrug of the shoulders rejoin—"The poor man is trying to take his revenge. You surely know what I have always thought and said about him!" Every judgment that implies disapproval of your doings is in the eyes of the multitude deprived of its sting, if you have been so clever as to have previously said mean things on every occasion and everywhere about the person who has expressed it, for in that case you can put it down as an attempt on the part of the other to retaliate.

A far-spread prejudice, which is evidently attributable to unpractical idealists, has it that people ought specially to exert themselves to obtain the favourable opinion and respect of those like them. Beware of trusting to the correctness of this proposition. Your competitors are your rivals. The great majority of them want success, and nothing but success, just as much as you do, and their scope will be lessened to the whole extent that yours is broadened. Do not expect of them either justice or good-will. Your faults will be exaggerated and retailed far and wide by them, your merits will be cleverly kept in the background. You have merely to concern yourself with two classes of men, namely, the great multitude who stand beneath you, and the few influential individuals in whose hands rest your chance of honour and position, in a word, your advancement. You must apply to your case the laws of a system of double optics, and learn so to conduct yourself that, viewed from below, you will seem very large, and, viewed from above, you will seem very small. That is by no means an easy matter, still with practice and some natural talent this accomplishment can be acquired. The multitude must believe that you are a genius of an extra-

ordinary capacity of extension; the leaders or high-priests of your profession, on the other hand, must regard you as a diligent, willing mediocrity who swears by the words of his teachers, spreads their fame about with all zeal, and would sooner die than strive to impair its brilliance by criticizing it, or by any performances of his own. If you only understand how to bring it about that you are always viewed by the people who are inferior and superior to you in the correct focus, then you need not care a jot for the opinion of your compeers. You are getting on in the world, and that is, so far as you are concerned, the chief matter. When once you have succeeded in leaving your competitors behind you, so soon as you get into the position of being able to benefit or injure them, then you will experience the joy which accrues from seeing the rapidity and completeness with which evil reports get transformed into eloquent praise, cold restraint into ardent friendship, and neglect into respectful admiration.

The fundamental philosophical principles, in accordance with which you ought to regulate your demeanour in the world, must of course evidently not be neglected by you so far as manifesting them externally is concerned. Only the very wealthy, whose millions cannot be called in question by any one, have the right to be modest in their domestic arrangements, but this class has of course apart from that nothing to get in my school for success. The poorer you are, the more necessary is it for you to make a respectable appearance. Clothe yourself richly, live elegantly, pass your existence as if you were heir to an estate in Golconda. But this means spending money? Quite so, and plenty of it too. Suppose, however, that one is not so fortunate as to possess any money? Then run up debts. Debts? Certainly, my boy, debts. There are few other ladders that furnish so speedy and certain an ascent to the noblest goals as debts. It is shocking to think of the way in which debts have been traduced and brought into disrepute by pedants. The most serious injustice has been done them. Clever Heine will be forgiven for much presumption and extravagance, but never for his line—"Man, pay your debts!" What indiscretion, what immorality! If you follow such advice as that you

will be lost. For just consider—Who will bother themselves about you if you go on paying your way in petty, narrow-minded honesty? No one will so much as turn their faces towards you. Put yourself under some threadbare standard, live in an attic, eat dry bread, and don't run up any debts; you will find there will be but one result—the dogs will yelp at you, the police will survey you with suspicion, and decent people will double-bolt their doors in your face. And the grocer whose customer you are will cease to take even the slightest interest in you, from the moment when you have paid him the price of his goods. If you were to fall in a heap in front of the door of his shop, the only thought that he will have will be to remove the obstruction from his threshold. If, on the other hand, you take everything on credit, if you pump wherever you can, your position will become transformed as if by a magic wand. In the first place, all kinds of enjoyments will be accessible to you that the poor starving wretch has to deny himself. Next, your external appearance will everywhere arouse the most favourable impression about you. Finally, you will have a whole body-guard or retinue of zealous, nay, fanatical fellow-workers for your success. For every creditor is a friend, a well-wisher, one who will advance you. He won't allow anything to happen to you. He will go through fire and water for you. No father will take so much trouble on your behalf as a creditor will. The more you are indebted to him, so much the more interest will he take in seeing you prosper. He will look after you so that not a hair of your head gets hurt, for your life is his money. He will tremble if any danger should threaten you, for your ruin means the grave of his claim. If you have plenty of creditors, my boy, your chances will from the first be assured. They will see that you get a rich wife, a high station in life, and a good reputation. By far the best application of capital consists in employing other people's money to give your own existence an ornamental form.

These would be approximately the leading ideas in accordance with which the nature of the pupils in my school of success would have to be formed and their demeanour regulated. The most advanced of them might also be initiated

into the fundamental view upon which the whole science of education for success is erected. It permits of being shortly expounded. One can make his way in the world in one of two ways—either by one's own superior qualities or by the mistakes of others. The first of these ways is by far the more difficult and uncertain, for, in the first place, it pre-supposes a person to have superior qualities, which, however, is not the case with every one, and in the next it is closely bound up with this condition, that these superior qualities are remarked and appreciated at the right time and by a wide circle, which almost never happens in actual experience. Speculation on the mistakes of others, on the contrary, always succeeds. A teacher would therefore do right in saying to his pupils—" Don't take the trouble to perform anything extraordinary or to let your work speak on your behalf; its voice is weak and will be shouted down amid the uproar of the jealous mediocrity; its language is a foreign one and will not be understood by the ignorant multitude; only the most eminent and most unselfish will take notice of or recognize your productions, and even they will hardly do anything for you unless you force your individuality under their eyes. Instead therefore of wasting your time with honest and severe exertions, employ it in studying the mistakes of the multitude and in reaping from them your own advantage. The multitude has no judgment of its own, therefore force one upon it; the multitude is shallow and thoughtless, therefore guard yourself against being profound or imputing to it capacity for mental labour; the multitude is dull of feeling, therefore do you make your appearance with such a clatter that even heavy ears must hear you and dim eyes see you; the multitude does not understand such a thing as irony, but takes everything literally, therefore be sure to say everything plainly and in the most easily understood terms, what is bad about your rivals, and what is good about yourself; the multitude has no memory, therefore avail yourself without anxiety of every path that may lead you to the goal; so soon as you have succeeded in getting there, no one will remember how you did it. With these fundamental principles you will become rich and great, and all will go well with you on this earth."

Suppose now some pupil whom I might be initiating into the mysteries of success in life were to hit upon the saucy idea of asking me—" Since you know so well the way in which one ought to set about it, you have yourself doubtless practised it to a considerable extent ? " That would put me in a dilemma. I could only rejoin—" I have seen others attain to success and have been content with that. If a man has to stand in the kitchen and direct his attention to the way that the broth is prepared, he loses his appetite. It is always, nevertheless, open to him to recommend it to others." [1]

[1] It is inconceivable, yet the fact, that several persons who have criticized this chapter, have regarded it as a serious exposition of the elements of education by which I hold, and have expressed the most edifying indignation at their immorality. What a pity that I am unable to provide myself with the photographs of these wise Thebans ! I would have been so pleased to have given the readers of this book the opportunity of at least becoming acquainted with the paper representation of the features of these monstrous contemporaries.

V

THE PSYCHO-PHYSIOLOGY OF GENIUS AND TALENT

I MUST start by giving as fine a definition as possible of the main notions about which the considerations that are undertaken in this chapter revolve. What is a talented individual? What is a man of genius? The answer to these questions is usually couched in stupid indefinite terms, among which nouns that express admiration and adjectives that express praise predominate. With this I cannot allow myself to rest content. My wish is to have, not complimentary rhetorical flourishes but a well-considered explanation. Now I imagine I am not very far from the truth if I say—"A talented individual is a being who performs actions that are generally or frequently practised in a better way than the majority of those who have tried to devote themselves to the same routine; a man of genius is one who of his own accord invents new modes of action that have never before been attempted, or practises old accomplishments in an entirely original, purely personal manner." It is intentionally that I define the talented individual as a being, and him of genius, on the other hand, as a man. Talent, in truth, does not appear to me to be in any way confined to humanity. It is undoubtedly present in the animal kingdom as well. A poodle which is capable of being trained for more complicated tricks than other dogs possesses talent; so also does a robin redbreast or a blackbird that can sing better than his fellows; perhaps even a pike that preys with greater success or a glowworm that shines extra brightly. Genius, on the other hand, is only conceivable in the case of mankind, in so far as it makes its appearance in an individual. It would appear to

be present when a personality, to express it in the popular way, strikes out for himself new paths that have never previously been trod. Now this, so far as human observation can determine, is not done by a single one of the brutes. Whole species may do it. They may therefore be endowed generally with genius. The entire community of living beings certainly does it. The development of organisms, from the one-celled creature up to man, proves it. It may therefore be said that the organic world, viewed as a whole, is an instance of genius, that evolution and geniality are synonymous terms, and that the theory of Descent is nothing else than the recognition and proclamation that the organic world is under the control of genius. No doubt it may also be affirmed that there exists in the case of individual animals a certain amount of freedom of development, an impulse to deviation from the inherited racial type, for the changes which we perceive in the build and nature of the species after long periods must of course have become accomplished facts in the individuals. But in the case of the individual animal the deviation from the older form and the tendency towards a new form is so exceedingly slight that we have to neglect it through not being able to perceive it. A bee that constructed an octagonal or quadrangular cell instead of a hexagonal one, a swallow that invented a new shape for its nest, and an ox that preferred death to being harnessed to a yoke, would all manifest genius. But anything of the kind has never as yet occurred in the world, whereas it cannot be denied that persons have been seen who have succeeded in accomplishing similar deviations from inherited modes of action.

There exists, therefore, between the talented individual and the man of genius not a quantitative but a qualitative difference. At the same time it does not escape my attention that, if researches are carried very deeply into the nature of things, every difference can nevertheless ultimately be traced back to something more or less. Let me just cite an instance. In order to be a professor of history one must possess a certain amount of memory, of power of will and of judgment. These qualities by themselves, however, constitute only a successful mediocrity, and at most a respectable degree of

talent. Should they again be present to quite an extraordinary extent, then the individual who so possesses them may become a great statesman, a ruler of men ; such a one may perhaps give the history of the world a new turn, and ought to be designated as a man of genius. It is true the difference solely depends upon the proportionate magnitude of these qualities, but it is one of such significance that the two merely quantitatively differing phenomena give the impression of being distinct in respect of their natures and of not standing in any degree of relationship to one another. It is in just the same way that Mont Blanc and a sand-like grain of quartz differ only quantitatively from one another. Fundamentally they are one and the same. If only the grain of quartz were big enough, it would be Mont Blanc ; the latter again need only shrink to quite a tiny size and it would become the sand-like grain. Nevertheless we find that the mere variation in size is sufficient to make out of two things that are in their nature identical such radically different phenomena as Mont Blanc and the sand-like grain are.

I have already, in my chapter on Majority and Minority, endeavoured to show that it is not every organism that possesses the capacity of replying to the impressions which come from without, with original, new, and uninherited reflex movements of the nervous and muscular systems, that is to say, thoughts and actions. This can only be done by an organism whose construction is specially perfect, whose vital energy is specially powerful. The man of genius, whose essential quality I think is to be recognized in the capacity of working up the perceptions obtained from the external world in an original manner, must be presumed to have a higher organic development. The keyboard of his mind possesses as it were an extra octave. This increased extent cannot be produced by any amount of diligence, any amount of training. It must form the basis of the construction of the aforesaid instrument of harmony. Goethe says ever so lightly, and with the most innocent air in the world—" Grasp thoroughly the whole of human life ! " The " jolly blade," into whose mouth he puts this line, is evidently a rogue in disguise. The expression sounds somewhat naïve, and is as a matter of fact the proud boast of a

sublime self-consciousness—" Grasp thoroughly the whole of human life!" . . . Really! The recipe is an approved one, but a man of genius only can follow it up. The ordinary and even the endowed man does not know in the least how he ought to set about making this grasp, and should he make the attempt he will withdraw his hand empty. This is due to the fact that the average man, and I include the talented individual also in this class, never really sees the world but merely its image in the eyes of the man of genius. He sees " the whole of human life," not in its true corporeality, in relief before his eyes, but merely as a shadow picture thrown upon a screen from the magic-lantern of the man of genius. He may try again and again to grasp these brightly coloured and changing shadows, but will never get anything within his hand. The phenomenon of the world forms a raw material, out of which the average man is unable to originate anything and from which only the man of genius can shape things, which then the former as well becomes able to understand. When the average man is able to see things or occurrences in exclusive groups, it is because the man of genius has arranged these groups. When the world and life come to be viewed by him in the form of easily surveyed pictures, it is because the man of genius has concentrated them and framed them. He feels, judges, and acts as the man of genius has felt, judged, and acted first of all before him. He passes over phenomena which have not been organically worked up by the man of genius, without perceiving them, without experiencing any sensations from them, and without forming any judgment concerning them.

I cannot make this relationship clearer than by an illustration from the organic world. Those elements which are required by every living being for its nourishment, namely, carbon and nitrogen, are everywhere present in the earth in immense quantities, yet animals are unable to do anything with them as such, or apply them to their purposes in the form in which these are primarily presented to them by Nature. In an atmosphere that happened to be overburdened with carbonic acid, on a soil that happened to be too rich in nitric salts, an animal would have to fall miserably to the

ground. These raw materials are only capable of being employed for nourishment by plants, and, among plants too, only those containing chlorophyl. It is only after the plant has taken up the carbon and nitrogen into its own organism that these elements become fit as nourishment for the animal. An exactly similar relationship holds good between the man of genius and the man who is not so distinguished, including the talented individual. A man of the latter class is unable to digest nature, to assimilate it, to transform it into constituent parts of his own consciousness. He sees the phenomena, but he fails to make any picture out of them; he hears, but he fails to comprehend and interpret. The man of genius, on the other hand, has in himself something special, some chlorophyl as it were, by the aid of which he acquires the capacity of forming from the phenomena perfected conceptions, which then the ordinary human mind as well can assume into its consciousness. Darwin gives us in the first chapter of his *Journey of a Naturalist round the World* an amazing picture of life upon the absolutely bare reef of St. Paul's, which is situated in the middle of the Atlantic Ocean. Two kinds of birds incubate there, the booby and a species of sea-swallow, known as the white-headed. On these birds, however, various flies, ticks, and moths live as parasites; their excrement nourishes species of dung-beetles and wood-lice; the flies and moths are preyed upon by numerous kinds of spiders, and one may add what Darwin omits to mention, namely, that without doubt a whole world of microscopical creatures, of infusoria, micrococci, and bacteria, swarms about these higher animals. All that was wanted then was for a single bird to come to St. Paul's in order at once to convert that black reef into a feeding-ground for quite a long series of creatures, which but for such a bird could not exist a single day in that place.

A process very similar is that of the origination of, for example, a literature in a nation. Some man of genius, by means of the mental digestive organ peculiar to him alone, elaborates his sense-impressions into a work of art that is intelligible to his fellow-men. Immediately, and as a result of that, there springs up a whole host of parasitical beings.

First of all come the imitators, who modify the original work of art with more or less skill. They are, as it were, the flies and ticks, which subsist on the blood of the sea-swallows. Next, critical and æsthetical schools make their appearance, which have no longer any connection with bare nature, and which concern themselves merely with the results of the digestion of this nature by the man of genius and his imitators. These are, so to speak, the spiders which follow in the train of the flies and the dung-beetles which feed upon the excremented matter. Finally come the writers of the history of the literature, who narrate with more or less consequentiality how it all came into existence. I cannot in my haste think of any living beings on the reef of St. Paul's that exactly correspond to these, for I do not quite see my way to compare them with the microbes. Thus we actually have now a great national literature with intellectual works of the second order, with æsthetic systems, with clever critical works, with histories of literature and special treatises on individual sections thereof, with learned commentaries upon all these books, and with a whole tribe of professors, who derive their livelihood by composing about them, from one end of the year to the other, all kinds of profound wordy phrases. Now the whole of this bookwork, along with its living retinue of learned men, takes its origin and the justification for its existence simply and solely from the creations of some ingenuous man of genius or other, who was neither a learned man nor a professor, and produced his masterpieces in the same way as an apple-tree bears apples, simply because it was part of his organic nature to produce them. All the other smaller individuals too who followed after him, if bare nature happened to be placed over against them, would not have been once able to say Bah! nay, they would never at all have made their appearance, any more than the diminutive animal world on the reef of St. Paul's would without the bird which made its existence a possibility.

Genius then depends upon an originally superior organic development, talent on a perfect cultivation, obtained by industry and training, of the natural faculties that are possessed by the major part of the sound and normal

individuals comprised in some given race. If, however, I were now to start the contention that genius has a physiological, structural basis, my readers would be justified in asking me what the nature of that tissue is, the fuller development of which gives rise to genius. This question appears at first sight sufficient to put one out of countenance, and yet perhaps it would not after all be so difficult to find an answer to it, if genius and talent were simple phenomena. One might in that event, by quite a simple method, attain to a solution of the problem. In this case there is a remarkably fine memory, in that an unusual power of will present; it is evident then that in the two cases the brain centres which govern the memory and the will are specially formed. Which centres these are is not at the present time accurately determined, but this will in due course be discovered, and indeed investigators are already on the track of several of them. In this way the analysis and explanation of the exceptional mental phenomena would become mere child's play. Yes, but unfortunately matters are not quite so simply situated. Genius and talent are extremely complex phenomena; it is but rarely that they manifest themselves through the pronounced appearance of some isolated elementary mental capacity, even though such a capacity is for the most part predominant and can be established by intimate research; nearly always there are several fundamental capacities employed, although in unequal degrees, in bringing about the composite phenomenon of genius or talent, and the varying degrees in which these capacities severally enter into it lead to such different results ultimately that it is frequently extremely difficult to get from them any conclusion as to their organic causes. The whole art of the psychological analysis of genius as well as of talent will, therefore, consist in resolving what looks like a homogeneous whole into its simple fundamental elements, and in tracing these right back to their source in the organism.

Every cultured individual now-a-days knows that our central nervous system, that is to say, the cerebrum and cerebellum, the medulla oblongata, the spinal cord and the sensory and motor nerves, is not one undivided organ with

one simple function, as is the case, for example, with the heart or kidneys, but a combination of numerous organs that are related indeed in respect of their constitution, but nevertheless govern entirely different functions. Pretty much the same relation holds good here as with the system of digestion. The entire length of the viscera from the entrance to the exit, with all their subordinate parts, forms one single apparatus, all the parts of which work together with the purpose in view of making the nutritive matter received into it fitted, by appropriate mechanical and chemical changes therein, for the building up and sustenance of the organism. But how different are the individual parts that make up this grand apparatus! The salivary glands possess nothing in common with the pancreas and the liver; the stomach is differently constituted from the duodenum; the gastric glands are in every respect distinct from the connivent valves. Here a fluid is secreted which is able to transform starchy matter into sugar, there again another fluid which is able to make insoluble albumen capable of being dissolved. This tissue is solely occupied with the driving onward of the nutritive mass, that on the contrary has temporarily to block the way for it and to force it to remain for a time in one place, while still another attends exclusively to the process of absorption. In just the same way it is that the central nervous system as a whole fulfils the great complex function of bringing about a connection between the Ego and the Non-Ego, or, to express it in a less philosophical manner, between the external world and the individual, by transforming impressions into consciousness and causing the consciousness to re-act upon the world. This work, however, is analyzable into numerous individual services, which are very unlike to one another and which are performed by entirely different portions of the brain and spinal cord. I will make this clearer by one single example. Take the sense of sight. Whoever takes this subject in hand from a perfectly unprofessional point of view will no doubt be inclined to regard it as quite a simple matter to take up a newspaper and read what is to be found there. That this would not be possible if one were blind would also at once be made plain to him. On the other hand, he

would probably be very much astonished if he were told that an eye capable of seeing is not sufficient of itself to go through the act of reading in its entirety, that in addition a series of other organs as well, which have their seat in the brain, must necessarily lend their aid, and that reading is impossible when even a single one of these organs fails to do its work with regularity. The eyeball appears to be a contrivance after the style of the camera obscura, on the rear wall of which falls a picture of the external world reduced in size but as distinct as possible. The background referred to is composed of an extension of the optic nerve, along which the impression received, that is to say, the image which has been thrown upon the background of the eye, is conducted to the brain. The impression is felt at a special part of the brain, in all likelihood that part which is situated in the posterior region of the so-called inner skull. Lastly, the interpretation of the impression takes place at another point, which, according to the investigations of Kussmaul, Westphal, and others, may with every appearance of probability be located in the inferior left lobe of the brain. The eye accordingly reflects the external world; the reflected image is conducted by the optic nerve to the inner skull; the inner skull transforms the reflected image into a sense-perception, which is passed on to the grey crus cerebri and by it elaborated into a conscious conception. Should the eye be incapacitated for its work, then the external world is reflected in it to no purpose, and the connection between the Ego and the Non-Ego becomes completely barred in this direction, that is, by way of the sense of vision. Should the optic nerve be diseased, then the world is, it is true, reflected at the proper spot, but the image never gets so far as the place which it must reach before it can be felt. Should the posterior portion of the inner skull happen to be out of order, then the image gets into the brain indeed, but there is, so to speak, no one there who can receive it; it is just as if a telegraphic communication existed, but there was no receiving apparatus in the office. In such a case the image is not felt. Lastly, should the crus cerebri at the inferior left lobe be disorganized, then, although the image will indeed be felt, it

will not be understood, it will not be properly interpreted. The individual will see, but will not know what he sees. It is as if, to abide by our simile of the telegraph, the receiving apparatus was present and the despatch was received all right at the office, but there were no means of forwarding it to the addressee. The same relation holds good of every single action of the mind, every exercise of the will, every feeling, every conception, and though these may appear to be ever so simple and uniform, in reality they are very complicated processes, and in bringing them into play numerous essentially different parts, that is to say, organs of the central nervous system, participate.

These individual organs, which are situated within the spinal cord and the brain, are called centres, and have all been brought under a classified system of arrangement. Both lower and higher centres are recognized. Their position on the ladder of gradation according to value is naturally determined by the function for which they are intended. In estimating the value of these functions, however, attention has been directed, not so much to their importance in the maintenance of life as to their share in calling up the nature that is specifically human. There are capacities which are possessed by man alone; for example, the faculty for abstract thought or speech. There are others again which are shared by man with the animals; for example, memory and will. There are still others too which are possessed by him in common with all living beings; for example, nutrition and procreation. (Take note, however, that even the most human of all the capacities, and, in particular, those of abstract thought and speech, which are adduced above as examples, are not to be taken as exclusively human because of the fact that they make their appearance in mankind in a perfect state of development, whereas on the other hand there is not a trace of them manifested in the animals that stand inferior to the human race. The labours of Romanes, the English animal psychologist, seem practically to settle it beyond all doubt, that human mental life is merely a higher form of the mental life of animals, and that here too, as all over, Nature simply follows an uninterrupted course of development with-

out suffering any gaps or chasms. Further discussion on this subject, however, would be out of place here.) The value of a function, and consequently also of the centre which controls it, stands accordingly in inverse proportion to its prevalence in the organic world and to its importance for the maintenance of life. Without the coarser and more refined processes of nutrition, and therefore without digestion, respiration, and circulation of the blood, the organism could not exist a single instant; but the centres of digestion in the ganglia of the so-called sympathetic nerve, and the centres in the medulla oblongata which regulate the actions of the muscles of the chest and of the heart, are the lowest of all. The movements of the limbs, and particularly the proper combinations of these movements which alone render walking, grasping, etc., possible, are no doubt of very great importance for the individual, but nevertheless it would be possible to live without them; on the other hand, the centres of muscular movement and the due harmony (co-ordination is the professional term) of these in the spinal cord, and probably in the appendages of the brain, perhaps also in the cerebellum, are of even a higher order. Lastly, memory, judgment, and imagination are for the organism, generally speaking, not vital necessaries but merely delightful luxuries; the individual may go on quite well living without them for years or even tens of years; their centres in the grey crus cerebri are, however, ranked as the highest.

This classified arrangement is by no means an arbitrary one, but is based on solid principles. The more common and necessary a function is, the more simple and coarse is the corresponding organic instrument; to the same extent that the function becomes more individualized and differentiated must the organic instrument also become more refined, more complicated, and therefore more delicate. A plough, for example, is an article of greater necessity and is of use to a larger number of persons than a watch, and the latter again is more necessary and of more frequent occurrence than a testing instrument for accurately comparing metre measures with the standard metre kept at Paris. The plough, however, is much coarser and simpler than the watch, and the

latter again is much coarser and simpler than the testing instrument. To destroy a plough is not an easy matter; a watch too has to be handled with some degree of gentleness, though it will withstand many a thump; the testing instrument, however, is thrown out of order by even the trembling of the ground caused by a vehicle driving past at a distance. Now the same sort of thing holds good with respect to the nerve centres. The more individualized, the more special and more exclusive the work that is required of them happens to be, so much the more complicated, the more refined, and therefore also the more delicate they are. Nutrition, by way of example, is a coarse form of activity. Strictly speaking, no special organs would be required for it, just as one might also for instance be able, though not quite so easily and conveniently, to make a furrow without the aid of a plough, by means of a stick or a stone or even with the naked hand.

Every little bit of protoplasm, even the simplest, possesses the faculty of deriving nourishment, in the most comprehensive sense, through the absorption of solid, liquid, and gaseous matter, which of course implies digestion and respiration. If we require for the operation in question a highly complex organic system, such as that of the circulation of the blood, of respiration and of digestion, it is simply because our organism has in truth more complicated tasks to perform than a little bit of protoplasm has, and because it is destined for a division of labour, just in the same way as, for instance, a minister of state has no time for cooking his own dinner or making his own clothing, things which the Neapolitan lazzarone, on the contrary, is well able to do. Nevertheless, the process of nutrition is, even in our complex organism, which performs its functions with a very extensive division of labour, an inferior and simple operation, and the centres which control it are so coarse that they resist destructive influences the longest, and as a matter of fact are the last to die. Even the centres of movement are still somewhat inferior, and therefore correspondingly able to hold out. Of these centres, the situation of which is in the spinal cord, only very little is required. If the sensory nerves are conveying to them the

perception that a foreign power is affecting some portion or other of the body, whether this may be declared in the form of a simple contact or in that of a painful one, then they have to cause definite sets of muscles to undergo a contraction, to prevent others doing the same sort of thing, and in this way to arouse an appropriate movement which will remove the body out of the reach of the foreign power. This process is called a reflex movement. It comes into being without the exercise of the will, nay, without knowledge on the part of the consciousness. A frog whose brain has been extirpated can go through it.

The centres of movement are very limited in power, not to say stupid. They are unable to distinguish the motive causes of the perceptions that are conveyed to them. They are merely able to respond to external excitations with the simplest degrees of motion. If the body is able to remain exposed to the foreign power without danger, then a higher centre must command them to remain still. If, conversely, it is not content with a simple withdrawal, if the body has, say, to run or jump, in order to remove itself beyond some external influence, then again a higher centre must command them to set into motion the proper groups of muscles, whose contraction produces the running or jumping. Finally, the brain centres which are wholly occupied with engendering volition and consciousness are the highest, for their mode of action is the most manifold and most complicated, it is one too that is exclusively human and requires, if it is to be properly carried out, such an accurate co-operation on the part of so many delicate components, that even very slight influences will disturb the super-sensitive apparatus, just in the same way as quite insignificant influences will also suffice to start its action. The higher a centre is, the later does it become developed into a mature state, the longer does the organism labour to make it perfect, and the sooner does it become worn out. The arrangement of the centres into classes is, therefore, not an arbitrary one, it is not established in accordance with particular views as to the greater or less importance of their functions, but is furnished by Nature herself. It would be in vain for an epicure to say—"Opinion

against opinion; I locate the centre of nutrition higher than the centres of memory and judgment." To him we would have to rejoin that his individual bias was leading him into a mistake, that the centre of nutrition could not possibly be the higher one, for it is found to exist throughout the whole animal kingdom, to make its appearance at the first instant of any particular life, to endure down to the ultimate decay of the organism, and to perform a task that is always uniform and never individually modified, whereas the centres of memory and judgment only first become observed in the higher animals, and do not make their appearance in any particular life until a certain degree of development has been attained, become as a rule blunted and incapacitated previous to the natural death of the organism, and perform a task which must be adaptable to all changes in its external circumstances.

The new Darwinian biology, which, by the way, had been already foreshadowed by Virchow, regards even the highest animal organism, the human one, merely as a colony of simpler living creatures, with an extensive division of labour, and variations among the individual citizens of this colony caused by such division of labour. Originally, every cell that goes to make up our being is in itself an organism which is able to do everything that an organism which has any desire to continue in existence must necessarily be able to do; the cell can therefore go through the process of nutrition, can create new cells in the simplest way by partition, and can move itself by virtue of contractions of its protoplasm. Since, however, countless millions of them combine to form the organism of an animal or of a man, they share these various occupations among themselves, each of them can merely attend to one definite kind of work, forgets all other kinds, and would have to come to nought but for the fact that the other cells do for it what it is no longer able itself to do. The red blood corpuscle has the power of absorbing oxygen and conveying it to all the tissues, but can no longer move or propagate itself. The muscular fibre can move and trail all other structures of the body along with it, but it would be unable to draw to itself out of Nature any unprepared nutritive matter, or to multiply, and so on.

Notwithstanding all the original uniformity of the different component parts, or, to abide by the expression I have already used, of the different citizens of the colony, there has nevertheless been developed among them a very decided system of degrees. The organism is a complex society, with proletarians, citizens, and ruling classes. There are elements included in it which represent the most varied degrees of development of animal life. Blood corpuscles and lymph cells do not occupy a higher place than do bacteria, with which they have only too often to contend, and by which in truth they are frequently vanquished, even though as a rule they prove themselves to be the stronger. The spinal cord of a human being occupies no higher a position than, say, that of a frog, his centre of sensation no higher a position than that of a member of the most inferior race of men, for example a Bushman. The principal centres of thought and judgment are the first which raise the doubtful organism above all other living creatures, and make it not a living creature merely, not a vertebrate animal, not a human being of the common type, but a definite man, an individual, who is distinct from all others and towers high above all others when these centres happen to be specially developed.

This hierarchy within the organism, nevertheless, does not exclude a certain degree of independence among the individual classes. I might say that there is a constant battle being waged among them, democratic and aristocratic principles alike striving for the mastery. The inferior centres do not show themselves willing to obey the commands of the higher ones, the higher strive in vain to withdraw themselves from the tyranny of the inferior. The brain centres cannot prevent the centres of nutrition from doing their work, they cannot direct them to do their work in some particular way, more quickly or more slowly; the functions of the blood corpuscles, the lymph glands, etc., are completely beyond the influence of the consciousness and the will. It is only indirectly that the brain centres are able to furnish the proof that they are after all the more powerful; it is within their power to withhold from the inferior centres those conditions under which alone they can exercise their functions; for in-

stance, they can prevent the conveyance of nourishment to the stomach and of air to the lungs, and thereby render it impossible for the digestive glands and blood corpuscles to perform their work. Conversely, the inferior centres also retain the higher ones in a state of extreme dependence, for the latter can only produce their best work when the former are fulfilling their duties with regularity and accuracy.

It is not merely among the inferior classes of the colony which forms the organism that democratic tendencies prevail; even their whole political system is of a democratic kind, or at all events not in the least monarchical. We do not possess one individual centre which governs all the centres of the organism with the omnipotence of an absolute monarch, but there are several which are perfectly equal, one as compared with the other, and are clothed with exactly the same standard of value in the organic colony. Three at all events of these centres are in a position to lay claim to be regarded as the triumvirate which exercises all sovereign privileges in the organism; these are the centres of consciousness, memory, and will. (Strictly speaking, it is a mere assumption on my part that these three activities have definite centres; up to the present time that has not been established, and it is quite possible that a somewhat more profound investigation might in the result lead to the recognition that consciousness, memory, and will are not simple but complex phenomena, which are reducible to ultimate constituent elements.) These three then exert a mutual influence, but are independent of one another. If their activity is to be of advantage and beneficial, they must work harmoniously together; nevertheless, this harmony is frequently absent in cases of brain disease, and even when there is the appearance of a perfect state of mental health. Memory is frequently lost while consciousness is preserved. In the same way, while consciousness is retained the power of will may be lost. Will and memory, on the other hand, may exist though consciousness is wanting, for instance, in somnambulism and in several forms of hypnotism. And even when all three centres are working normally, they nevertheless generally go their own ways, which may actually be parallel, though this is by no

means invariably the case. We know that the memory is quite independent of the will. It brings into our consciousness conceptions which we have neither sought nor demanded, and obstinately persists in keeping back from us others which we endeavour with the utmost exertion of our faculties to remember. In the same way, the will is independent of the consciousness and all that it comprises. However well we may argue to ourselves, with the aid of all the powers of our judgment, that we ought to complete some definite piece of work, we nevertheless delay to do it. The consciousness is perfectly convinced, but the will does not pay any heed to it. Or it may be that we prove to ourselves, with even the most unanswerable arguments, that we ought to refrain from doing some definite thing. The will is all attention, allows the matter to be argued out, and yet finally does the very thing against which the consciousness sets itself. The highest centres accordingly are perfectly independent of one another, at one time are in agreement one with the other, at another act in a hostile manner, and in truth contend for the supreme authority over the organism during the whole course of its life.

We have already, in the chapter on Majority and Minority, seen that it is only when very richly and perfectly developed that the highest centres are in a position to bring about new combinations, that is to say, to respond to external impressions with such thoughts and actions as up to that time had not been customary, and for which in general too there was no precedent, while these same centres, at a less perfect stage of development, merely work in a traditional and inherited fashion, that is to say, act in exactly the same way as they themselves have been in the habit of acting previously on similar occasions, and also as their parents before them had been in the habit of acting. Every kind of action that is repeatedly practised becomes of an organic nature; that is to say, the mutual relationship which must subsist between the nerve cells and the nerve fibres, in order that this kind of action may be produced, becomes a steadfast and obstinate one, so that latterly this kind of action goes on automatically of its own accord. In spite of all that Herbert Spencer may

say against the adducing of comparisons and illustrations in order to explain psychological processes, this very method continues nevertheless to be a good way for making a subject which is so extremely difficult clear to the unprofessional classes. I have no hesitation, therefore, to try to explain what is to be understood by inorganic and organic activity of the brain centres by adducing a homely and therefore intelligible illustration. Organic activity bears the same relation to inorganic activity that the performance of a musical-box does to that of a professional musician. The piece for which the musical-box is constructed will be played by the latter correctly from beginning to end, provided the instrument is wound up; any other piece besides this particular one, however, cannot of course be performed by it. The professional musician, on the contrary, will play any piece whose notes are placed in front of him, and should he chance to be possessed of a higher degree of talent, he will be able even to invent new pieces and not confine himself to merely playing off from the notes of strangers. In the case of the average-minded masses the brain centres are like the mechanical musical-box; they merely play those pieces which have been fitted up in them, which have become organic in them. Who was the mechanic by whom their works were arranged for the particular pieces of music? None other than the series of ancestors who kept playing these pieces of music in the same fashion, for so long a period, that the instrument from which musical notes were originally derived by freely moving fingers finally became automatic. In the case of exceptional men, on the other hand, the brain centres are like the professional musicians; they are able to play pieces which had never previously been heard; their repertoire is not composed of a few pieces that are dinned into one's ears again and again, but is continually being changed and is without numerical limitations.

There still remains this last question—Why is it that frequently repeated forms of action become organic? Or, to abide by the illustration above selected—Why is it that a piece by being freely played again and again ultimately becomes fixed up in the barrel of the musical-box? My answer can

only be a hypothesis, which, however, is in harmony with all that we know of the laws of Nature—it comes about in virtue of the universal law that in Nature everything is done with the least possible expenditure of energy. If the will or the consciousness happen to have new combinations to form, there is necessitated a great dispersal of nerve force. Every movement in the work has to be directed and controlled. Now this disposal of force is rendered unnecessary if it is possible to go through forms of action that are of frequent occurrence in an automatic manner. In that case a single impulse, such as may be produced by a mere sense-impression or a command of the will or of the consciousness, will suffice to set the mechanism into motion, and the work will be performed from beginning to end without the highest centres being once required to give their attention thereto, to interfere in the matter, or to issue commands of their own. This is doubtless the reason why forms of action that are frequently practised cease to be any longer controlled spontaneously by the highest centres and take place automatically, that is to say, organically. This tendency towards a saving of labour and energy by as extensive a transformation as possible of spontaneous into automatic action is one of so strong a nature that it is constantly forced into prominence not only in the race but even in the individual. No very long series of generations is needed in order that a function may become organic in the centres that control it; that will happen in quite a short space of time, in a much less space than the life of any individual human being. Even the most powerful organism, and therefore according to my former conclusions the most original one, sees its individuality becoming automatic, and, even though it continues to be original as opposed to other organisms, it nevertheless is no longer so with reference to itself. It becomes like a musical-box which mechanically reproduces its particular musical pieces. In this way it seems explained how it is that men of genius of even the highest individuality ultimately become tainted with mannerisms, and the good old shoemaker was not so far wrong when he stood in front of a fine picture and passed the remark, that doubtless a considerable amount of practice

must have been indulged in before such pictures could be produced.

The automatic functions of the highest centres come within our consciousness not in the form of thoughts but in that of emotions. Only those forms of action which from first to last take place in the consciousness, that is to say, which commence with a sense-impression, get transformed into a perception, become to some extent acquainted with their causes, are suspended for a while in the memory, and induce to a judgment, the execution of which is expressly assigned to the will—only these forms of action are recognized by the thinking ego as distinct and sharply defined thoughts. Those forms of action, on the other hand, which take place without any direct intervention on the part of the consciousness, and which consequently are characterized by this feature, namely, that a centre upon being prompted thereto runs mechanically through a cycle of organized acts, just as a musical-box plays off its piece—these forms of action are recognized simply as indistinct, vague phenomena of the mind, or, to abide by the foreign but strictly defined technical term, as emotions. To this distinction one must maintain a very strict adherence. It forms the hypothetical basis of all that I have still in this chapter to say, and I shall also make free use of it in the subsequent divisions of this book. It must never be forgotten, however, that what we call the consciousness does not include the entire organism, but only one of the organs thereof, one of its brain centres, that, in short, it is not *the* consciousness but *a* consciousness. Each centre has its own consciousness, of which, however, the highest centre, that, namely, which is the foundation of our thinking ego, of our mental personality, receives no cognizance at all, or at most a hazy one. Of the processes in the centres of the spinal cord and of the sympathetic system, our ego, that is to say, the highest brain centre, learns nothing, or at least nothing definite. And yet it is undoubtedly the case that these centres have each a consciousness of their own, though only a limited and subordinate one, and that they know in every case the proper form of action, the

proper commands for the tissues controlled by them, with which they ought to respond when excited.

The consciousness must be regarded as an inner eye which examines the centres and their action through a sort of microscope. The field of view of this microscope is a comparatively speaking small one; what is situated beyond it naturally escapes the observing eye just as much as do the beginnings and endings of pictures which stretch out beyond the confined field of vision. The final results of the action of other centres are apprehended by the consciousness indeed; not so are its beginning and development. If the memory thrusts a conception into the field of view of the consciousness, the latter sees it; how this conception, however, is produced and whither it tends, the consciousness does not see. Precisely the same state of matters holds good with regard to the will. The effect of some action of the centre of volition, that is, a complex movement of the muscles or series of movements that is adopted to the end in view, is perceived by the consciousness. But how the innervating impulse, that is to say, the energy which impels the muscles to contraction by means of the nerve fibres, comes into existence—with that the consciousness does not become acquainted.

The ways in which the consciousness becomes cognizant of its own action and that of the other centres, so far as they make their appearance within its restricted field of view, are completely different. Those special acts which the consciousness itself begins and completes, and all the parts of which it prepares itself, leave behind in it neither uncertainty nor state of dissatisfaction. They are in truth, as has been remarked above, thoughts, and therefore things that are perfectly clear; the merely imperfectly apprehended acts of the other centres, on the contrary, on which it exerts no direct influence, whose separate sections it does not distinguish with certainty, whose beginning, growth, and end escape its notice, arouse in the consciousness a feeling of discomfort and tension, I might almost say an optical strain, a feeling such as the eye experiences when it wants to see distinctly something which is far away, small or dimly illuminated, and is unable

to do so; it is a recognition of its own limitations, a recognition of weakness and imperfection, a state of curiosity and uneasiness and an instinctive desire after farther knowledge. This sensation is in truth the emotion which comes into our consciousness merely as a presentiment, an eager longing, an indefinable state of excitement and a vaguely circumscribed wish.

The precise and lucid work of thinking, that state of activity on the part of the highest conscious centre, which for purposes of conciseness and in contradistinction to emotion I will term cogitation, is accomplished by those more perfectly equipped individuals who are possessed of the capacity of producing new combinations. The multitude of average men whose centres work automatically, who consequently merely comprise organized combinations, is wholly restricted to emotion. By far the largest number of men never during all their life have any lucid fully illuminated thoughts in their consciousness. The latter is in their case never able to perceive anything but half-obscured vague pictures. Such men would not be in a position, at any given instant, to describe clearly what was taking place in their minds; every endeavour of this sort would at once dwindle away into indefinite nonsense and unmeaning commonplaces without relief; they live exclusively on emotions. Emotion is consequently what is inherited, cogitation what is acquired. Emotion is action on the part of the race, cogitation action on the part of the individual.

In spite of its vagueness, in spite of the fact that it leaves the consciousness unsatisfied, nay, even uneasy, emotion is subjectively more agreeable than cogitation, and that too for three reasons. In the first place, it is easier, that is to say, it comes into being with a less amount of encroachment on nervous energy, for in truth automatic work on the part of the centres is more comfortably done than conscious and spontaneous work, and comfort is experienced with pleasure, whereas straining causes trouble or pain. In the second place, the incapacity of the consciousness to see distinctly into the processes which take place within the automatically working centres, and therefore into the emotions, actually implies not only an element of anxiety but also an element

of attraction and stimulation; the consciousness makes an effort to conjecture what it does not know, it tries to complete what it is unable clearly to see; this state of activity of the consciousness is nothing else than the phantasy, which, therefore, is stimulated by the emotion; the phantasy, however, is, as we know by experience, an agreeable state of activity of the consciousness. Thirdly, and this argument has already been advanced by Darwin, the most essential states of action of the organism are naturally also the most frequently exercised; those organized functions which have in consequence of their frequent repetition become automatic, will, as a rule, therefore be also the most essential for the maintenance of the individual and of the race; in that these functions only get into the consciousness in the form of emotions, the organism will ascribe the greatest significance to the emotions as being the utterance of those organic states of action which are for it the most essential and most pregnant with significance, or, to express it subjectively, it experiences them in the most intense and most powerful degree.

With respect to cogitation, the converse of these three arguments holds good. It cannot be experienced as more agreeable, because, in the first place, it is too difficult and inconvenient for the average organism; because, in the second place, it does not stimulate that delightful play of the consciousness which is usually called phantasy; and because, thirdly, it does not appear at first sight to the organism important and essential, for it has, as it knows from experience, hitherto existed without it, and its importance or usefulness will only first be capable of demonstration when, after once being exercised with advantage to the organism, it has had frequent opportunities to repeat itself; in which last event, however, it speedily becomes organized and is transformed from cogitation into emotion.

Quite a quantity of phenomena that are somewhat obscure become explained by these hypotheses. The Romantic school, which prefers the ancient to what is new, and regards the Middle Ages as "more poetical" than our period, grows enthusiastic over a ruin, and calls a building which has been made suitable for its purpose and happens to be in a good

condition abominable—this Romantic school has its roots in this fact, namely, that old, inherited conceptions stimulate the centres to automatic states of action, and are in consequence experienced as emotions, whereas new conceptions which are not yet organized can only be studied with an exertion of the consciousness, and consequently call up cogitation.

The old stage-coach aroused in the last generation, which still made use of it, emotion, the railway cogitation ; to those accordingly who lived contemporaneously with the great revolution in our system of transport the stage-coach seemed poetical, the railway insipid and unpleasant. All poetry and its effects are based upon this fundamental difference between emotion and cogitation. The contents of poetry consist of general human relations, circumstances and passions, that is, of organized actions that are frequently practised and have become automatic ; poetry, as a consequence of that fact, is produced out of emotion and arouses emotion. Even in its style of expression it retains its connection with old conceptions, and that not accidentally but necessarily, because in truth it is ever in the nature of things that traditional conceptions should be thrust into the field of view of the consciousness in the outward form in which they have been inherited from the ancestors. For this reason it is that our poetry of to-day still savours of yesterday and its fairies and divinities ; for this reason it is that it anthropomorphizes Nature and the affections of the mind ; for this reason it is that it arms its heroes with arrows and clubs instead of with Mauser rifles ; for this reason it is that it makes travellers accomplish their journeys on good steeds instead of in a sleeping-car ; for this reason it is that it keeps up that view of the world which was put forth in the infancy of our civilization. Of the conceptions and forms of modern times it cannot make anything. With our present day view of the world it does not feel comfortable. It is too modern for it ; it has not yet become organic ; it is not yet automatic ; in a word, it is as yet not emotional but only cogitational. For which reason it is that every endeavour to give a modern substance to poetry fails to obtain the slightest results. Though many a maker of rhymes sets himself to construct

what is called poetry of thought and introduces science into his verses, such a one merely proves thereby that he has not even the slightest conception of the true nature of poetry. Poetry is emotion; to try to convert it into cogitation would be just as futile as to seek to transform a dream into the clearness of day while at the same time maintaining its character as a dream. The transition from cogitation to emotion will of course ensue. It is merely a question of time. What is new to-day will in the course of a thousand years or so have become ancient. What possesses an individual character to-day will then have become the property of the race and be traditional and organized. A railway station will then appear just as much a subject for poetry as now-a-days a ruined castle does, one of Krupp's guns just as much as now-a-days a jousting lance, and an allusion to an electro-dynamic machine or a bacillus just as much as now-a-days a reference to the wings of song or to the lamentation of the nightingale. For, of course, it must not be forgotten that all this old poetical machinery was once upon a time quite as novel and therefore as cogitational as railways, gunnery, and natural science are at present. There is not the least doubt that in earlier times knightly armour and castles or mountain peaks were felt to be just as insipid as a military coat and a set of barracks now-a-days seem to be, and only what at that time happened to be old was allowed to take rank as poetical. This is not mere hypothesis; we have definite points of support for this contention. Among nearly all ancient peoples there became associated with stone implements religious, mystical, and therefore emotional conceptions, after these peoples had for some centuries been in the possession of bronze articles. The stone implement was to the barbarians of the bronze and the still earlier iron ages what mediæval lumber is to enthusiastic natures of our own time.

There are generations, ages, peoples and periods, in which the automatic form of action outweighs the voluntarily combining activity of the highest centres, in which emotion outweighs cogitation. Woman, whose highest centres hardly ever attain to that more vigorous degree of culture which

is far oftener reached in the case of the other sex, is much more emotional than man. Children again, whose centres are not yet fully developed, and the aged, in whose case these are already on the decline, are to all intents possessed only of emotions and have no cogitation. In sickness and in convalescence, while the organism and therefore also the whole central nervous system is still in a state of weakness, it merely calls emotions into being. Brain diseases furnish the very first evidence of their presence by the ease with which the individual affected changes his temperament, and becomes inclined to weep and fond of laughter in turn, in other words, by his being subject to emotions. The Chinese and the modern Latin peoples are by nature emotional; they allow themselves to be guided by half-conscious temperaments, that is to say, by the automatic inherited activity of their centres, and only produce a very few individuals in whom the highest centres are strong enough to check ("to inhibit" is the technical term used by physiologists) this automatism and to bring about spontaneous combinations, in other words, to think individually, to be cogitational. The Middle Ages formed quite a long period of a purely emotional character. The traditional element was all-powerful. The individual was completely merged in the family, the corporate body, and the class. For a duration of nearly five hundred years there did not appear a single brain centre which would have been capable of cogitation. For this reason it was that the entire period could not help being sentimental, religious, and mystical, adjectives which simply denote that lack of clearness with which, as we have already seen, the automatic action of the centres reach the individual's consciousness.

The detailed explanations which I have just been making have become somewhat profuse, but the reader who is not a psychologist by profession will find them indispensable. Only now will he be able to understand what was really meant when I used the expression that genius and talent ought to be traced back to the degree of development reached by certain centres. In what part of the brain each of these

centres is to be found, the special development of which finds expression in some special gift, is a matter of which in most cases we are ignorant. It is not, however, excluded; on the contrary, it is even probable that the combined investigations of clinical medicine, of pathological anatomy, and of experimental pathology, and possibly even that systematic form of research into the brains of eminent men which has only been started in quite recent times, will establish the localities of the various centres.

Those persons in whose eyes the different forms of mental action are but manifestations of a soul, that is, of a non-material lodger within our body, will regard the explanation of the phenomenon of a man of genius, and even of that of a person of talent, as either ridiculously simple or utterly impossible. They will be unable to help their argument by alleging that Peter has more soul than Paul, for, where there is no matter present, there is also no extension, this applying only to matter, and no degree of intensity, this applying only to that energy which is connected with matter, and therefore also no more and no less, but always the same uniformity. Just as little can they say that different souls vary in respect of their nature, that the question therefore is not about a more or less but about something distinct; for a difference of nature in what is non-material is just as unthinkable by the human understanding as a difference of nature in matter, which according to our view of things is assumed to be uniform, unchangeable and always like itself. There, therefore, remains merely this explanation, which is none, that by the grace of God one soul is in truth endowed with a richer form of activity than another. On the other hand, those who join recent science in assuming states of mental activity to be manifestations of definite organs, that is to say, the brain centres, will be able without any difficulty to understand how it is that a better developed organ will do its work more perfectly than one less well developed. Why this or that centre should be better developed in one individual than in another is a matter which is of course not yet explained in this way. This importunate why. which inquires into the ultimate

foundation of phenomena, is, however, just what exact science generally avoids.

Upon the subject of talent we need not linger for any length of time. It has no anatomical basis. It does not depend upon any special development of the centres. Its possessor does not differ either in nature or even in respect of generalities from those persons in whom no such feature is observed. I feel very much inclined to express this thought still more harshly, and say that generally speaking there is no such thing as talent. At all events, nothing specific ought to be understood by this term. What is comprised in it is industry and opportunity—opportunity, namely, for exercise and for development. Every normal man, a designation that in terms excludes disease, stuntedness, and a state of backwardness as compared with the average present day type of white humanity, comprises in himself all that is necessary to go through any form of action in a manner of the kind that is commonly called "talented." He simply requires to devote himself exclusively or mainly to this form of action. All that is desired can be made out of every perfectly healthy average child, if only it be drilled into it with judiciousness, for a sufficient length of time and with a due degree of firmness. If the training was of the proper kind it would not be in the least a work of art to make up regiments, nay, armies of any kind that you might like, of artists, authors, orators, savants, without previous selection, by lot or according to fancy, just as recruits are enlisted into the forces, and every man of these armies would in the end have to be recognized throughout as a person of talent. It is on this tacit assumption that our entire system of culture in truth depends. Our scholastic theory assumes that all scholars are equally endowed and able to attain the self-same goal of culture; it fixes accordingly for all the self-same methods of instruction, the self-same tasks, the self-same subjects. Should the scholars, however, turn out to be both good and bad, this is supposed to be simply due, provided imperfect, that is to say, non-typical, diseased development can be left out of account, to a greater or less degree of diligence or to the possibility of devoting themselves with more or less exclusiveness to the

tasks set them at school. Without doubt there would never be anything new produced by these armies of savants, orators, poets, painters, etc.; they would never extend the limits of their profession, never elevate its aims; all, however, that has been accomplished before them will be copied by them quite adroitly, quite easily, quite faultlessly, and whoever can act so is of course termed a person of talent. There are plenty of examples of men who must as a matter of fact be recognized as talented in the most varied departments. I will merely refer to the universal talent of the Renaissance, and select as an individual example Urbino Baldi, who was a classical philologist, painter, mathematician, physician, and poet, was acquainted with sixteen languages, taught medicine at the University of Padua, and was thoroughly proficient in every department. In earlier centuries such universally talented individuals were not in the least rare, and even at the present day as many as ever might be desired could be reared but for the fact that the amount of knowledge has become so considerably increased. Now-a-days it takes a much longer time to copy with due skill all that has been already hitherto accomplished. It has become a question of years, not of ability. If men could live to the age of two hundred years, one and the same person would be able at the present day, just as much as at the time of the Renaissance, to acquire quite a large number of various forms of mental activity, even so as to be complete master of them, and in each of these to attain that amount of proficiency which would entitle him to be considered talented in respect of the speciality concerned.

But how ought I to begin to deal with the so-called express inclinations towards some particular calling? One child has from its earliest years the desire to be a soldier, another a musician, or a natural philosopher, or a mechanic. Surely this points to the fact that there is in them something which in the case of others is quite lacking or not possessed to the same degree. Without doubt, it is said. I, however, am of opinion that, in all these cases of apparent inclination on the part of a child for any occupation, we have to deal with inexact observations. In the majority of instances, the child's

preference for any special occupation will be found to have been induced into it by some external circumstances, by the example of those around it, by conversations held in its presence, by books that had accidentally come into its hands, or by theatrical performances that had taken place before its eyes, and should it continue to manifest a perfect indifference towards all occupations, only a very slight excitation is indeed needed in order to direct its attention to one more than to the others. And in the small number of cases which cannot be explained in this way, the so-called express inclination for some special occupation is not in any way such, but simply an express aversion to other occupations which has arisen out of the feeling of incapacity for certain kinds of action, which again is the result of a defective development of individual nerve centres. At this point, however, we at last reach the sphere of disease, we have before us individuals who in some direction or another lag behind the normal type, while my proposition, that talent is simply development through sufficient practice, is only applicable to perfectly and regularly trained individuals of the normal type. If one only looks closely into the matter, it will be found that every time that a youth runs away from the gymnasium or the merchant's office to become an artist or a soldier, he does not so act, as later on perhaps he may himself imagine, from an irresistible impulse towards the occupations of artist or soldier, but from disgust at mathematics or at the strict discipline of a business-house, and with the indefinite conception that the other career would prove easier and more pleasant than that upon which he had originally entered. This unsettled individual is not in possession of something over and beyond what others have, of a special capacity for art or for military affairs, but if anything possesses less than others, for he lacks the capacity of enduring that close application to work which is implied in orderly study and mercantile discipline.

In consequence of what has gone before, the question as to the hereditary nature of talent becomes at once set at rest. Since I do not believe in talent as something typified in the organism, I am also of course unable to believe in its hereditary nature. All that is given out as having been proved by

experience cannot shake me from my view any the more than can Galton's much renowned work, entitled by him, *Hereditary Genius*, though the noun here is used in a remarkably loose way. The fact that in any family quite a succession of so-called persons of talent in one and the same direction may be observed, is not the slightest proof. What is more natural than that the child should be prompted at an early age by the example of its father or uncle, etc., to turn its thoughts in some particular direction? The son of a physician is from childhood upwards surrounded by conceptions of a medical and scientific kind; unless he happens to be a fool, he cannot help busying himself with these conceptions, they will impel him to select his father's occupation or one of the same kind, and should he be a normal person he will undoubtedly become a proficient in the occupation of his choice, and therefore a person of talent. Would that imply that he had inherited some definite talent from his father? Not at all. His capacity of perfectly acquiring all forms of human activity simply became directed by the example of his father towards the acquisition of his father's form of activity. If the son of a general, the same boy would have become a person of military talent, and if the son of a painter a talented artist; in all cases a respectable mediocrity, though hardly attaining to more than that. The appearance in a family of several individuals all talented in the same department, far from showing the hereditary nature of talent, proves exactly the reverse; it proves that any normally developed child can be raised to the rank of a person of talent in any career to which its attention may have been directed by family traditions, and that simply by the force of example and without any particular organic training being necessary thereto. There is one crucial test that is able finally to settle the question, but so far as my knowledge goes it has never been applied. Our test would be found if a child who had been picked up on the street and educated in a foundling hospital should, in spite of a school training in which no particular occupation was made specially prominent, select some definite calling from a decided inclination for it, and attain in the same a fair, if not also extraordinary, degree of

success, and should then later on discover his origin and learn that he was sprung from a family which had already given evidence of talent in the self-same calling. This test would have to be proved again and again if the influence of all chance is to be excluded. Only then would it be proved that any definite talent is hereditary. Nevertheless I repeat that I have no knowledge of any such crucial test having ever as yet been in existence, and I doubt very much whether any such will come into existence.

Quite differently situated are matters with respect to genius. This is not an equivalent expression for dexterity, acquired through a sufficient amount of practice. It is not a normal type which has become well developed in consequence of favourable conditions. Genius is an extraordinary form of culture which is wholly different from normal forms of culture. It arises from the special development of a nerve centre, possibly and frequently of several nerve centres, or even of all the centres. The man of genius, therefore, is capable of all forms of activity that are controlled by the, in his case, unusually developed centres, in an extraordinarily perfect manner, much more perfectly than persons of the average type, even though these had by practice cultivated their corresponding centres to the degree of perfection attainable by them. From the purely physiological point of view, one ought, properly speaking, to use the term genius in every case that a centre, nay, that a texture is cultivated to an extraordinary degree, far surpassing the normal standard. An extremely robust man who is in a position to perform the severest labours without rest, to continue proof against all inclemencies of the weather, to do without sleep, with insufficient nourishment, and with imperfect clothing, without at the same time suffering any detriment to his health, might be termed a man of genius in respect of vital energy, for the most inferior of all his centres, those, namely, which look after the simplest functions of the organism, the most intimate mechanical and chemical work of the living cell, must in his case be extraordinarily perfect. Milo of Croton was in this sense a man of muscular genius. In his case the muscular tissue had reached a state of development such as no other

person of whom the ancients had knowledge possessed. In consequence of this he was able to do things that previous to his time had never been accomplished, that did not appear to normal men to be possible, and, indeed, were not so possible. He cleft trees asunder with his hands. This was a way of rending upon which, previously to him, no one had hit, and which could not be imitated by others, however they might try. Others could at most try it on much thinner and weaker trees. There must certainly have existed persons of muscular talent, who by continuous practice got so far as to accomplish upon young stems the cunning trick which the man of muscular genius was able by himself to go through in respect of old trees, at the first attempt, without previously seeing it done or practising it. There might be a man who was in possession of so keen a sense of hearing that, as he walked along the streets, he could distinguish with perfect accuracy what happened to be spoken, or even whispered, in the innermost apartments of the houses. Such a person would be a man of auditory genius. He would without difficulty, and as it were instinctively, learn things and get at the bottom of mysteries, the divining of which would, to the normal man, not even appear conceivable. To such forms of perfection, however, we do not apply the term genius, and that because they are not exclusively human. The most inferior of the centres of the vital processes are possessed by every living creature, and if the robust man to whom reference has been made above is entitled to be termed a man of genius in respect of vital energy, so also would a frog which had got lodged in a stone and remained alive there for a period of innumerable centuries, or a cat which had been shut up continuously for a period of six weeks, without nourishment, in an iron spout among the ruins of a fire, without perishing, be each justified in claiming the same designation. So also Milo of Croton might, in virtue of his muscular development, simply be placed among a lot that included an elephant of special strength, or it might be merely some exceptional flea which was able to jump much farther than all his fellows, and a man of auditory genius does not rank as superior to those animals in whose case one or another sense happens to be

developed up to a state of perfection that is incomprehensible by us, such as the sense of sight in day birds of prey or the sense of smell in dogs. Certain of the animals are possessed of capacities that pre-suppose some peculiar centre which is wanting in man. The gymnote (*Gymnotus electricus*) is able to impart electrical shocks ; the carrier pigeon finds its way back to its cot across whole continents ; certain carnivorous wasps possess so accurate a knowledge of the anatomy of the articulates (*arthrozoa*) that they pierce with their stings, which are directed with unerring certainty, the nerve ganglia of all the rings in a caterpillar's body, and yet except the ganglia of the head, so that the caterpillar is rendered completely paralyzed but does not die, its living body thus serving for the nourishment of the young of the wasp without it being able to hurt them by movements in the narrow nest. All such capacities are wanting to man. It will also be difficult for him ever to attain to them, for he does not require them. They are superabundantly replaced in him by a higher and more comprehensive capacity, namely, that of judgment. He constructs for himself more powerful sources of electricity than those of the electrical eel. He finds his way by the aid of compass and charts, just as surely as the carrier pigeon. He studies anatomy until he becomes even more conversant with it than the wasp of prey. But it would, nevertheless, be theoretically thinkable, that as an exceptional case a person might once have been born who was endowed with the electrical organ of the gymnotus, or the organ that enables the carrier pigeon to find his locality, or the organ that in the wasp of prey serves as a primer of anatomy and physiology, or an organ which gave him the capacity of apprehending the movements that take place in the working brain centres of third parties, in the same way as we apprehend movements of another kind with our eyes and ears, that is, a thought-reading organ. A man of this kind would accomplish things which we could not do otherwise than call wonderful. In the eyes of all others, except those of the highest degree of culture, he would reckon as a magician. As a man of genius, however, he would hardly be designated. We have in truth to reserve

this name for such individuals as have exceptionally powerfully developed in them, not some infra or superhuman centre or other, but one that is purely and exclusively human, one of those highest centres which man alone among all organisms possesses in the fullest state of perfection.

This limitation to its signification precludes that misuse of the word of which even the most carefully thought-out compositions are as a rule guilty. It is with regret that I find myself obliged to introduce names, but I regard it as an impossibility to dispense with them if these deductions are to be made perfectly clear. A Liszt, a Mackart, a Dawson is termed a man of genius. That is no more correct than were we, to take the example I gave above, to call a person of extraordinary muscular strength a man of genius. In all three cases, the pith of the matter lies in a special state of perfection of very inferior centres. In order to prove this, it is merely necessary to analyze the manifestly very highly complex phenomena of a pianist, artist, and tragedian, and to distinguish their simple, ultimate component elements.

Let us first of all take the case of playing the piano. This is performed by movements of the fingers, hands, and arms (the movements of the feet, being comparatively speaking unessential, may be left by us out of account), and by impulses that make these movements stronger or weaker, slower or faster, homogeneous or irregular. There is thus to be taken into account here a descending series of the following—a centre which sends forth impulses to movements of different degrees of strength and different kinds, changing with an extraordinary rapidity, nerves which are sufficiently sensitive to transmit these impulses with the greatest speed and accuracy, in such a way that they do not suffer the slightest alteration either in the degree of their strength or in their peculiar character, and, lastly, muscles belonging to the upper limbs of the body which graduate their contractions so narrowly that the movements always remain perfectly proportional to the impulses. We know that the labour of the effective conjunction of muscular movements, co-ordination, has definite centres, and we are entitled to assume that the musical impulses originate in some centre of

sensation, the automatic action of which is excited by impressions, particularly those of the sense of hearing, though also of the other senses and brain centres, if these last impressions occur always or frequently in conjunction with those of the sense of hearing. Non-acoustic impressions of this kind, which commonly occur combined with acoustic impressions, are primarily those of a sexual order. Primitive man in all probability, like a whole series of animals of the present day, accompanied his love-making with noisy demonstrations (rhythmical cries, singing), as a result of which there has survived an organic connection in our brain-centres of the actions of the centres controlling the instinct of propagation and the sensibility to musical notes. If one of these centres becomes excited, the other is at the same time called into action. Feelings of an amatory nature thus stir up musical impulses, while the activity of the centre controlling the musical impulses sets the centre of love (or propagation of the species) a-going. But this is by no means the only connection of this kind. Every phenomenon in the external world includes excitations that affect not one sense but all the senses. Let us take the phenomenon of a sunny spring morning. The chief sense to which this phenomenon appeals is naturally that of vision, because its most essential constituent is the sunlight and its peculiar effects upon the landscape. But, besides this, the sense of smell receives the impression of the exhalations from the grass and flowers, watery vapour and ozone, the sense of feeling the impression of coolness and a certain degree of humidity, and the sense of hearing that of the voices of various animals and birds and the rustling of foliage and other things. Every single complex phenomenon is thus composed of impressions upon several or all the senses; these various impressions, some of which are stronger while the others are weaker, are retained by the memory as a collective image, and a definite impression upon some individual sense also arouses in the other centres of reflection and sensation the impressions which are commonly experienced in conjunction with that particular impression. Thus the characteristic scent of a summer morning in the country, or in a forest, will call up in us the

whole phenomenon of a summer morning, and therefore also all the other sense-impressions of which as a whole it is composed—the impression on the feeling of coolness and freshness, and the impression on the hearing of the crowing of cocks, the songs of larks, the barking of dogs, and the tinkling of bells, etc. Any excitation whatsoever, however slight, of a selected sense may therefore stimulate not only the others but even the centre regulating one's sensibility to musical notes to a state of activity, the behaviour of which will vary according to the nature of the particular excitation of the sense. The connection between the actions of the various centres has place entirely independently of the consciousness, perfectly automatically. The consciousness even is never able to determine which sense-impression it is that has stimulated the activity of another centre, because it is not accustomed to the analysis of the phenomena and the fixing of the share which each sense takes in bringing them about, but commonly regards some particular sense-impression as the only essential one, because it happens to be the strongest, while it leaves the rest that are weaker and more subordinate altogether out of account. Not to deviate too far from my special subject, I will merely adduce one example of this. The phenomenon of an oil painting also includes among its constituent parts an impression on the sense of smell, that of oil colours or varnish; and yet it is of so weak a nature, and in particular so unimportant as compared with the visual impression, that we hardly become conscious of it, that we leave it wholly out of account, and never think of the fact that even the centre which controls our faculty of smell has a share in working up the conception of "oil painting" in our consciousness. Nevertheless it suffices for the centre of smell merely to receive a sense-impression of a similar kind, that is to say, like that from varnish or oil colours, in order to set also a-going the rest of the centres that are accustomed to act in concert whenever the conception of "oil painting" is being elaborated by them; the conception of a painting will thus suddenly make its appearance in our consciousness without our being able to explain what led to this image being brought into our memory.

This is one of the most essential forms of association of ideas; in this way may be explained those temperaments which steal over us, we know not how; and in the same way probably may also be explained most dreams, in which, when the centre of consciousness is in a weak or suspended state of activity, the centres of the senses are prompted by very slight external impressions to produce automatically the conceptions of which they form a constituent part. In order to be a distinguished player of the piano, an individual has therefore to fulfil the following conditions—he must possess a very sensitive nervous system, that is to say, one that is capable for the work required of it; his centre regulating sensations of sound must be readily stimulated to the giving out of impulses by external impressions, on not only the sense of hearing but also the rest of his senses according to the mechanism explained above, and his centre of co-ordination must be a specially perfect one, and able to combine in the most rapid alternation the finest, most accurate, and most intricate movements of the muscles of the hands.

The rank of the piano artist is fixed by the superiority of one or the other centre. Should his centre of co-ordination be principally developed, he will be a brilliant artist so far as manifestation is concerned, will easily overcome all difficulties, but will give the impression of coldness and want of heart. Should, on the other hand, not only his centre of co-ordination but also that regulating sensations of sound be prominently developed, then his playing will not only be good in respect of manipulation, but will also reflect changing and manifold impulses to sensations, and so produce a lively and impressive effect. A centre regulating sensations of sounds which is specially highly developed will be in a position to give out more powerful impulses than the ordinary and well-known ones, and to combine these in an original and novel manner; it forms the psycho-physical basis of a composer-genius; it is the distinguishing feature of a Beethoven. A centre regulating sensations of sound developed to this extent, with which a well-developed centre of co-ordination is associated, will produce an individual who is a man of genius so far as com-

posing is concerned, and who is at the same time distinguished as an instrumentalist; for instance, a Mozart. Should the first of these centres again be unusually perfect while nevertheless the second holds an even better position, then there will result one of those composers whose music only attains its full effect when it happens to be played by himself, or perfectly true to his special style, that is to say, to the special style of his centre of co-ordination; and therefore, for example, a Chopin. A centre of co-ordination that is exceedingly well developed in combination with a centre regulating sensations of sound somewhat, though not much, surpassing the average, will ultimately produce an astonishingly fine instrumentalist and a remarkably good renderer of the music of others, and yet a composer hardly up to the standard of mediocrity, like Liszt, to whom the term man of genius is erroneously applied. Genius in this case would, as exhaustive analysis has shown, depend upon an extraordinary development of the centre of co-ordination, and therefore be a genius of co-ordination. This centre is, however, an inferior one and not exclusively human, and its special development gives no title to the designation of genius, which must be reserved for the perfection of specifically human centres. A marked degree of co-ordination is manifested even by animals, in particular by monkeys, whose feats in climbing and keeping their equilibrium cannot be imitated by many men. Even in the case of human beings, a conspicuously good performance on the part of what are comparatively speaking inferior forms of action likewise presupposes very perfect centres of co-ordination. For example, a highly-developed centre of co-ordination for the lower limbs of the body has to be possessed in order to be an excellent skater. The same degree of perfection, combined with a well-developed centre regulating sensations of sound, will produce a first-rate dancer; on the other hand, it will form the psycho-physical basis of a splendid horseman if, instead of being accompanied by remarkable centre-regulating sensations of sound, it has conjoined with it well-developed centres of volition, that most essential constituent element of courage as well as of judgment. A high state of development of the centre of co-ordination of the upper limbs of the body like-

wise gives a whole series of capacities that vary according to the higher centres, which at one and the same time are well developed and communicate their impulses to the centre in question. The combination of the centres which control co-ordination and the sensations of sound produces, as we have seen, the piano artist; that of the first of these with the centres of volition and judgment will give a first-rate pugilist. There thus exists a curious parallel between the dancer and pianist on the one side and the horseman and pugilist on the other. To speak, therefore, of a "genial" pianist is no more correct than to accord the title of genius to a dancer, horseman, or pugilist. The material that I have in hand on this point is of vast extent. It would admit of a most discursive treatment, not merely in chapters but in thick volumes. The different centres might be combined in an almost infinite variety of ways, and it might be seen what particular capacities in consequence resulted. This must, however, be relegated to the reader who will be stimulated thereto by the above examples.

There is still one question which I will take up, though likewise merely by way of suggestion and not to exhaustion. What would a man have become who was possessed of the organic qualities of a Liszt, but happened to be born before the piano or any other instrument had been invented which was designed to produce musical notes by movements of the hands? The characteristic combination of the two centres, of which the one is extraordinarily and the other well developed, would in truth in that case fail to come into being. Each centre would then work for itself, and in place of a Liszt we would observe a being who was distinguished by a great efficiency of the fingers in all kinds of manual work, and consequently by, say, skilful knotting and braiding, or perhaps even by a remarkable readiness for jugglery, and in addition was possessed of musical tastes, which might be manifested merely by a preference for songs, or perhaps also by attempts at singing or whistling. Even the action of the chief centre which has to be taken into consideration in the case of a piano artist, and the highest development of which, as a matter of fact, produces a man of genius, say, a Beethoven,

that namely of the centre regulating sensations of sound, is still a purely automatic, purely emotional one, and lags behind every cogitational form of action. The action of the less important centre, that of co-ordination, is generally speaking no longer a mental, an exclusively human one, but one which is peculiar to very many organisms besides the human, and that too in a high state of perfection.

Let us now apply the same method of analysis to the phenomenon of an artist in colours, for instance, a Mackart. The work of art of a painter, namely, a picture, is also something very complex, whose simple constituents can unite in the most varied combinations when the collective phenomenon is being produced. What has to be taken into consideration in a picture is, first of all, the effect of the colouring, then the form, and finally the intellectual substance, what is usually called the subject ("anecdote") or the composition. Our centre regulating sensations of light is so arranged that it experiences the impressions of certain colours and of the combinations of these as agreeable, but those of others as disagreeable. Upon what this difference in subjective sensation depends, I cannot explain with certainty. Helmholtz and Brücke have published the results of splendid investigations into this matter, and at all events made it seem very probable that the subjective effect of the combination of colours, as of that of musical notes, depends upon the proportion in which the number, extent, and form of the vibrations, or wave motions, are situated one to the other, which in all probability excite in our organs of sense those changes which we experience as colours or musical notes. According to these eminent investigators, then, agreeable and disagreeable sensations of colour and musical notes would seem to depend upon the unconscious establishment of simple or complex arithmetical and geometrical ratios among the movements of the ether or matter. Be this as it may, however, we may rest content with the fact in our experience that there are agreeable and disagreeable colours and combinations of colours. A specially well-developed centre regulating sensations of light will give a man the capacity, first of all, to experience the impressions of colours in a specially strong degree, and consequently also

to take a particular delight in well-balanced arrangements of colours, and to feel a very great degree of repulsion towards discordant ones; and in the next place even to discover colours and combinations of colours, the effects of which shall be agreeable in a very especial measure. The centre which is under consideration here, like all the centres of the senses, is one of the inferior brain centres. It is by no means an essentially human one, but is found distributed through the entire animal kingdom, even among the very lowest classes. We may quite well assume too that very many birds, nay, actually butterflies, beetles, and even the soft-bodied animals (*mollusca*), possess it, for the brilliant colouring of these animals would otherwise be perfectly incomprehensible; since Darwin's time, however, it has been pretty generally conceded that the beautiful colours of animals have been brought about by natural selection, that is to say, are due to the fact that the individual who happened to be ornamented with them was preferably sought after by the individuals of the opposite sex, which would be inconceivable unless there was pre-supposed in the case of the latter individuals a sense for the effects of colours, a delight in beautiful colours. Merely through his sense of colour, that is to say, through his delight in beautiful colours, therefore, a man would be only fit company for the magpie, the peacock butterfly (*vanessa Io*), or the sea-anemone. The development of the centre regulating sensations of light is simply of use as an artistic training; it suffices for the production of agreeable, brilliantly ornamented surfaces, such as carpets, tapestry, and frescoes, with well-balanced combinations of colour. Original pictures, which come into being under the impulse of this centre, will probably have the same effect as pretty oriental carpets, and yet as works of art they will occupy an inferior rank, from the fact that they are in their nature far from so perfect as the others.

The second element which has to be taken into consideration in a painting is its form. A picture aims, of course, at cleverly reproducing for us the external appearances of things. The means which are employed in painting in order to accomplish this reproduction are drawing and colouring. (Note well, however, that I merely lay down this distinction

from motives of convenience; for, fundamentally, what we designate drawing is also merely an effect of colour; drawing likewise reproduces things to us by a contrasting of different degrees of light and shade or of colours, usually black and white.) In reality we view things according to their situation in space, and therefore in forms, sizes, and degrees of light and shade that vary according to their position above or beneath us or to one side of us. One and the same ball appears to us big when it is close to us, and small when it is at a distance from us; at one time, if it happens to be appropriately illuminated, we see a full half of it, while in other situations only a greater or less section of it; that it is round we do not recognize directly, but from the fact that the rounded part lying nearest to us is differently illuminated and shows a different colouring than that which is more remotely situated. In spite of the fact that the image which we have of this ball upon the retina is in each of its positions a different one, we nevertheless trace it back to one and the same inducing cause, that is to say, we recognize in what we see always the same ball, whether we happen to see it near us and big or at a distance and small, whether we see an entire half or a smaller section, whether we see it illuminated from the front and brightest at the centre and more dark as the edges of the circular image are approached, or again illuminated from behind and darkest at the centre and brighter as the edges are approached. What these images, that is to say, the impressions on the retina, have enabled us to understand is the experience which we have obtained through the co-operation of the other senses and of the judgment. In reality we see merely flat images which are situated in one and the same plane, the constituent parts of which are of different sizes, different colours, and different degrees of brightness. That these differences in colour, size, and light and shade correspond to differences in the degree of distance, and that the objects which appear to us as if they were in the same plane are as a matter of fact situated in different planes, are things that we learn by experience. In order to know that a flat image of a circular form, which is differently illuminated at the centre than at the edges, is a

ball, we must at some time have touched such an image, we must recall to our minds the movements which our hand had to execute in order to enclose the surface of this object, our muscular senses must come to the assistance of our sense of vision and complete its designs. In the same way, in order to know that a house which appears to us to be small and indistinct, is as a matter of fact big but remote, we must at some time have traversed the road to a small and indistinct object of this kind, and recall to our minds the movements which our legs had to make in order to make finally out of the small and indistinct object a large and sharply defined one. Now painting copies objects, not as they really are but as they are wont to be reflected upon our retinas, that is, in their apparent conditions of size, colour, and light and shade, and, if it duly reproduces these, we simply follow our acquired custom and interpret this flat painting as we are wont to interpret the flat images of our retinas, that is to say, we see in some little point that happens to be indistinctly painted, in spite of its small size, a large house, in spite of the fact that it is there on the canvas only a few inches from our eyes, a distant house, and in spite of the fact that it is on the self-same canvas surface as many other objects, a house which is situated in a quite different, far farther removed plane than, say, the trees or other objects of the foreground. The work of interpretation naturally does not take place in the eye but in the higher centres, those of memory and judgment; it is merely set a-going by the visual impression. In order, therefore, to call up an image in our consciousness, the painter requires, strictly speaking, to bring before our eyes only some single characteristic, the outline, say, or the light effects of the object in question. All the other characteristics are automatically added thereto by the memory, because it is accustomed to see this characteristic always appear in conjunction with others. It is due to this that we frequently fancy we see with our eyes on a painting things that are assuredly not on the canvas, which our eyes therefore are certainly unable to see, which our brain centres superadd, and with which they automatically complete the suggestions which the painter may have introduced into his painting. I

shall illustrate this by merely a single example. We fancy we can see in a painting the individual hairs of a beard, the individual leaves of a tree. The painter has, however, painted neither hairs nor leaves, but only a kind of effect of the light on an irregular brown or green surface; but, as we have frequently observed this effect of the light on beards and the foliage of trees, and learned by experience that it implies hairs or leaves, our recollection supplies even to the painting the hairs or leaves which certainly are not there, and we perceive in our brain centres something that is most assuredly not seen by our eyes. Now the art of the painter consists in discovering the characteristic features of things and in copying them in the same way as they are accustomed to be experienced in reality by our retinas. He may reproduce all the characteristic features or only some of them, provided they are essential ones. The mere outline of itself recalls to us a single characteristic, namely, the general definition of the things, and therefore demands of the brain centres a very great amount of assistance if it is by itself to give rise to any conception of such things. The drawing of the perspective outline, even without further filling up, gives us some conception of the relations of things in space, for we find repeated in it the apparent differences in size that we observe in the reality. A monochrome drawing again superadds to the things a farther characteristic feature, namely, those differences in respect of light and shade which in the reality simplifies our work of estimating sizes and distances as well as that of determining the constitution of the object. Lastly, colour supplies us with the final characteristic feature, which can in general be perceived by our sense of vision, and a painting which is all right in respect of outlines, perspective, light and shade, and colour, calls up in our eyes an impression quite similar to that which the things themselves produce, so that it becomes impossible for the higher centres to distinguish the one impression from the other, or to fail to recognize the things themselves in the presence of all the optical characteristics in the painted imitation of the things. The work of the painter consists in very closely analyzing his conceptions, in doing which he has to distinguish the interest

of the higher centres from that of his visual impressions. To abide by the example given above—if he happen to see foliage, he will have to divide this conception up, and note that he does not see with his eyes leaves, but merely a peculiarly illuminated, irregular green surface, which it remains for his memory to resolve into the image of individual leaves; he ought therefore also to reproduce, not leaves such as he conceives in his mind but does not really see, but merely the peculiarly illuminated green surface, which his eyes actually perceive. The unskilled have in truth no conception of the difference that exists between what our eyes actually see and what we conceive in our minds when we receive some definite visual impression. The painter, however, has to completely neglect the conception and keep entirely to the impression which gave rise to it. This analysis takes place unconsciously. It is dependent on a capacity proceeding from the centres for apprehending light, of enervating the muscles which are set into motion in the acts of drawing and painting, without any interference taking place on the part of the higher centres, that is, those of memory and judgment. The consequence of this is that the hand is only able to draw and paint that which the centre regulating sensations of light really experiences, that is to say, sees, and not that which the higher centres supply over and above by way of completing and changing it. The interference of the higher centres, however, is not entirely excluded by the direct connection between the centres regulating sensations of light and those of motion, which forms the organic basis of the drawer's and painter's talent. The higher centres make a special selection from among the constituent parts of the impression that is received of a thing by the centre regulating sensations of light, reserving only a few essential parts, which are then reproduced by the aid of movements of the muscles, while the non-essential parts are left more or less neglected. The sensation, which is also in many cases an unconscious one, that the one characteristic feature, some outline, some effect of the light, is better fitted for giving rise to a conception of any particular object than another, elevates the form of

activity of the painter from the state of being an activity on the part of the senses and muscles to one of an intellectual order, and brings it about that a painting is something different from a photograph. And yet this form of activity is always of a very inferior nature; it only proceeds from the highest centres in the slightest degree, nor does it appeal to the highest centres. Its result is a work of art, the sole value of which lies in its truth; and yet it is an uninteresting and in no way stimulating truth. An individual who is in possession of the capacity of reproducing his visual impressions purely, without intermixture of the finishing touches supplied by the recollection and the judgment, will be able to make an excellent drawing, and if he happen to have a sense of colour, a painting also from still-life. He will become a classic in respect of asparagus and oysters, and triumph in the delineation of copper caldrons and huge wine-glasses. Farther than this, however, he will not get.

And now we are come to the third element which has to be kept in view in the case of a painting, namely, its intellectual contents, that is to say, what it represents, its matter or thoughts. The same gift of analysis that enables a painter to separate the real optical appearances of things from their psychical images, and to grasp and reproduce the most essential constituent elements of these appearances, allows him, when he has had the benefit of a higher degree of culture, also to retain and initiate the real optical appearances of processes. As little as we actually see the roundness of a ball, so little do we see a movement or a frame of mind. In the former case we see as a matter of fact a characteristically illuminated flat circular form, in the latter a series of images following one on the other, or a certain position of the facial muscles, the limbs and the body. Experience, however, has taught us that the flat circular form, when it is illuminated in that particular way stands for a ball, and likewise do we gather from experience that a series of identical images making their appearance one after another on our retinas, and, in order to be seen more and more plainly, occasioning movements of the muscles of our eyes and necks, implies movement on the part of the object observed, and

that knitting of the brows and clenched fists in a man denote anger. Now the painter grasps the optical characteristic which is significant of, for example, anger, joy, or grief, and, in so far as he accurately repeats it, he causes the conception to occur to us that he has represented the original correspondent frame of mind which is unrepresentable. From what I have just stated, the limits of the painter's art will sufficiently appear. This art is in the first place one of a purely historical nature; that is to say, it is only able to represent processes which we have previously seen in that or in a similar form, whose optical features are well known to us. Should a painter try to represent such processes as are entirely unknown to us, we would then stand in front of an optical phenomenon, which we would be unable to interpret; the retina would receive impressions, but memory and judgment would superadd nothing to them, and the painting would simply produce an effect on the senses but no conception, which, in truth, with the aid of his art a painter is able not to give, but only to suggest, and which our own minds must elaborate upon the foundation of the suggestion furnished by the painter. Painting, further, is incapable of representing very differentiated mental processes, and must confine itself to broad, comprehensive generalities. It is unable to give expression to the special thought—"I am dissatisfied with the way in which I have spent the last ten years of my life, and in particular with the career which I have selected;" it can at most only express in general terms this feeling—"I am dissatisfied." And why? Because in truth dissatisfaction in general has a visible characteristic, namely, a particular bearing and behaviour, whereas dissatisfaction with a career or some part of one's life, is not distinguished by any special optical characteristic that is peculiar to it alone from dissatisfaction in general. It is because of these limits that painting is a purely emotional art and cannot be a cogitational one. What is perfectly novel, what is purely personal, what is not connected with something that is known to us is inaccessible to it. The genius of the painter, however, will be found in this, that in the first place it enables him to discover, in even very complex processes,

optical characteristics which are peculiar to them only, and not to others, but which nevertheless any but the sharpest and most penetrating analysis would fail to disclose; that, secondly, he reproduces with the highest degree of fidelity the characteristics which he has apprehended; and that, thirdly, he chooses important processes as subjects for his representation. Mere talent and certainly absence of talent would, at all events in the first two respects, never be able to accomplish what genius can, for they are incapable of analyzing phenomena into their essential optical features, and of characteristically reproducing these features; all that they can accomplish is to imitate the painter's analysis of the phenomena furnished to them by the genius.

We have accordingly the following simple constituents which go to make up a painter-genius—a sense of colour, the capacity of distinguishing in a phenomenon what is really seen by the eyes from what is superadded by the activity of the mind, and lastly, the faculty of tracing back complex processes to the optical characteristics which appertain to them alone, and which at once afford their proper signification. The first two capacities are inferior and automatic; their possession cannot give any title to the designation "genius." The third, on the other hand, presupposes an interference on the part of higher centres and bargains for a new, independent form of action, the finding out, namely, of characteristic optical features that had never before been comprehended as such. All three of these capacities do not necessarily have to be combined or developed to the same degree. According as the one or the other predominates, the physiognomy of the painter-genius also becomes changed. Analytical capacity, truthfulness, and sense of colour, in practically equivalent degrees of perfection, produce a Raphael; with the help of these can be created a Sistine Madonna, which will reproduce the essential characteristics of that phenomenon, which arouses in a man the most powerful emotions (in woman the effect is not nearly so great, and in the half-developed individual it is not found at all), the phenomenon, namely, of a beautifully perfect and pure woman, who will stimulate his sexual centres, and of a

Divine being, who will appeal to his inherited sense for what is mystical, which at the same time, in respect of drawing and colour, gives the impression of truthfulness, and by virtue of the harmony of its tones produces agreeable effects on the senses. A Murillo and a Velasquez possess likewise an agreeable harmony of tones as well as considerable optical truthfulness, but do not arouse the same emotions, because the contents of their most important works are applied not to two so powerful feelings as those of a sexual and mystical order, but either to the latter alone or to mere curiosity, to a more or less superficial participation in some human process. (It is not Murillo's Madonnas that I have here in my mind, for these I do not consider to be his best creations, but his great epic pictures in the Caridad.) Charm of colour, a moderate degree of truthfulness and association, not with profoundly human but with patriotic, national emotions, produce a Paolo Veronese, while truthfulness and significant contents without any special charm of colour produce a Cornelius or Feuerbach. Should the painter's highest gift be wanting, that is, the gift of reproducing significant phenomena or processes in their essential optical characteristic features, but optical truthfulness and sense of colour be prominently present, then we shall have a Leibl, a Meissonier, a Hondekoeter—artists who are able to create what is startling and agreeable, though scarcely to excite deep-seated emotions, and who have no longer any right to the title of genius. A strong predominance of the capacity of seeing and copying in a way that is optically true, when there is also a limited development or want of development of the highest analytical faculty and sense of colour, produces a Courbet, whose pictures are neither agreeable to the sense of colour nor important in respect of contents, but are yet so optically true that they give us exactly the same sensations as the things represented do in the reality. Thus we very nearly approach the phenomena of photography here, with this single trifling difference, that all the optical characteristics of things, saving only their colour, are faithfully reproduced by the art in question, whereas in the case of a Courbet, on the other hand, a higher centre detains the image on its unconscious path from the

retina to the painting hand, suppresses a few non-essential constituent parts, and lets through merely those that are characteristic. Finally, a mere sense of colour without anything else produces a Mackart, who knows how to place agreeable colours side by side, just like the Australian crested bower-bird, with its artificial shelter, but neither sees nor reproduces things in a way that is optically true, nor is in a position to represent important processes or phenomena in their essential visible characteristic features, in such a way that one can comprehend them and receive from them the emotions which the processes or phenomena themselves might be able to give. To call a Mackart a man of genius would not be permissible, therefore, unless the same designation is likewise applied to the crested or satin bower-bird.

With the actor we can deal in a much more speedy manner. His peculiar capacity is due to the development, attained by the exercise of special care, of such organic qualities as appertain to the great majority, not only of men but also of the higher animals, namely, the faculty of imitation and the reciprocal action of the conceptions upon the movements, and of the movements upon the conceptions. On the faculty of imitation I do not need to throw away words. Every one knows what that is, and to show upon what organic presumptions it depends will be the task of a subsequent chapter. The reciprocal action between the conceptions and the movements, on the other hand, requires a word or two of explanation. All the external impressions which are transmitted by means of the nerves of sensation to the centres of the spinal cord or of the brain, arouse in these centres a work which our senses can apprehend as an impulse to movement. (It may be merely remarked here in passing, without going into further details, that even when the external impression gives rise, to all appearance, simply to conscious mental work—cogitation—or unconscious, automatic work on the part of the higher centres—emotion—but not to any distinguishable motion, there is also set agoing at the same time an impulse to movement, though of course only a very feeble one, which specially sensitive persons, such as those well-known "thought-readers," are able in many cases just to

apprehend.) Let us take some gross and therefore plain examples. The sensory nerves of the tip of a finger, which has been brought heedlessly into proximity to a hot furnace-plate, will transmit to the spinal cord and brain an impression, which will be experienced in the inferior centre of the spinal cord, generally as danger, and in the higher centre more definitely, as pain, and, in truth, as a burning pain. The response to this is furnished by the centre of the spinal cord, in the form of an impulse to movement given to the muscles of the arm, which causes a speedy withdrawal of the hand to take place; and by the brain centre, in the form of an impulse to movement given to the muscles of the face, lungs, and windpipe, which results in a painful distortion of the countenance and the utterance of a cry. The sensation or conception of the pain from a burn has therefore produced certain definite impulses to movement. Conversely, too, the same movements, that is to say, the abrupt withdrawal of the hand, the characteristic distortion of the muscles of the face, and the utterance of a cry, brought about by violent contraction of the intercostal muscles and the diaphragm combined with a corresponding position of the muscles of the windpipe, arouse in the higher brain centres the sensation or conception of a sudden pain in the hand. Every one has it in his power to make the following experiment—first of all, to determine by what movements in his case the mental affection of profound grief attains to visible expression, whether, for instance, by bowing down of the head, by some particular expression, some particular tone of the voice, sobs, etc.; and then, to imitate accurately all these muscular movements. If he does this, he will very soon notice, probably to his astonishment, that he has become of a profoundly sorrowful temperament. He will actually perceive in that case, that even those attendant phenomena upon this temperament will make their appearance, which cannot be voluntarily called into being for the reason that they are not due to movements of the transverse muscles, that is to say, shedding of tears and associations of gloomy ideas, images of the phantasy, etc. It must always in truth be kept in mind, that the nerves which lead from the outer limits of

the body to the centres, as well as these very centres and the nerves which run from them to other centres or to muscles all form one single apparatus, the connections of which have become organic and automatic, and that the apparatus goes through the whole cycle of its automatic work, no matter at what point it may happen to be set in motion, and that, too, either in the proper sequence or in a reverse direction, by way of conception to movement or by way of movement to conception. This is the mechanism with which the actor accomplishes his task, the object of which is to render sensibly perceptible given mental conditions, those, namely, of the person whom he is representing. This task he can accomplish in two ways, a conscious one and an unconscious one. With the help of the consciousness he can observe accurately and critically, by what muscular movements, that is, gestures, expressions of countenance, and inflections of voice, given mental conditions, such as, for instance, mirth, distrust, dreaminess, etc., are wont to attain to visible and audible expression in the case of tranquilly minded men, in the case of the nervous, in the case of the well-bred, in the case of the coarse, and seek, by mere exertion of his will-power, to imitate these collective groups of movements. Or he can form a general conception of the mental condition to be expressed, assist the conception by some of the movements that are commonly induced by it, and then leave it to these by a reflex action to convert the conception into one of a very lively character, so that it may then unconsciously and automatically give out all the impulses to movement which are familiar to it, the voluntary ones as well as the involuntary ones. The first method is the more difficult, and it always is in the highest degree uncertain. It pre-supposes the same gift for observation and analysis of phenomena which we have recognized to be necessary in the case of the painter. The actor who imitates with the help of his consciousness must have actually observed the mental conditions that he wants to represent; of their perceptible forms of expression, not a single one that is essential ought to have escaped him, and he cannot, like the painter, confine himself to the optical characteristics of the phenomena, but must also pay due

respect to their phonetic features. Should he fail to find in his memory the type that he wants to imitate, or should he not have observed this critically enough, then his imitation will turn out awkward and imperfect and be unable to give the impression of truth. The second method, on the contrary, is easy and certain. Since the same mental conditions, with but very slight individual variations, excite in all human beings the same perceptible manifestations, and since, moreover, the actor is also a human being, it follows that he will be able, when once he has produced in himself the mental condition under consideration, to allow it to work away quietly; all the perceptible manifestations that are characteristic of it, without any exception, alike the voluntary as the involuntary, even tears, the expression of the eyes, etc., will without fail one after another come to light and a perfectly truthful imitation of humanity will be attained. The only thing that is needed for the practical application of this method, is a very variable and inconstant condition of equilibrium on the part of the brain centres. One ought to be free from any fixed temperaments, any powerful consciousness, any peculiar personality. The cogitational activity of the highest centres ought not to predominate over their emotional activity, nor prevent or interfere with their automatic work. The distinguished actor must be like a gun with an exceptionally ready action of the trigger. Just as in the latter case the slightest touch produces a discharge, so in the case of the former the most trifling external impression will produce the mental condition which is to be represented, and which then automatically of itself completes its manifestation to the senses. It must be quite clear that such a relationship is only to be looked for in a brain the highest centres of which are as a rule unoccupied, that is, perform no mental labour of their own, and for that reason are ready to respond to all sense-impressions with the corresponding temperaments and conceptions. Where is there room left for a man of genius here? The invariably cogitational gifts of observation and conscious imitation will merely make an actor of the second degree. On the other hand, the most distinguished, most faithful, and most impressionist adopters of

men's parts are just those who must be of a subordinate class of mind, have an empty consciousness and a stunted personality, and their centres must be capable of being set into automatic action with an ease that might almost be designated as diseased. Is it not a significant fact, that physical beauty and fine qualities of voice, even though inferior forms of organic perfection, are nevertheless among the essential requisites which afterwards produce an impressionist actor of men's parts! The distinguished actor has most emphatically the psychological disposition of the child and of the savage; the hampering (inhibiting) action of the centres of the consciousness does not in his case exert any influence upon the automatic work of the centres of movement. Education has in the case of civilized men the very task of exercising and strengthening this hampering kind of action; we are enjoined not to suffer our emotional states to become perceptible to the senses in impulses to movement, in cries, facial distortions and gestures, and as a matter of fact we go the length of completely suppressing the automatic work of the centres, of avoiding every or almost every sensibly perceptible manifestation of our emotional states, and trying not to betray by any outward sign what is going on in our consciousness. The actor who might attain to this ideal of education would not be able any longer to exercise his art.

It follows accordingly from what we have just seen that it involves an utter misuse of words to apply the term man of genius in music to an instrumentalist, in painting to a combiner of agreeable colours, or to actors in general. An exceptional development of such inferior centres as those of co-ordination or of sensation of light, or a specially lively reciprocal action of movements and the mental conditions which commonly induce them, give no more title to the designation of man of genius than, say, a specially perfect muscular development or specially good eyesight. Genius merely depends upon an exceptional state of perfection of the highest and therefore purely human brain centres of which we consider judgment and will to be states of activity. Judgment and will, then, are the ultimate capacities, the united action of which elevates the human being above the animal, and the

exceptionally powerful elaboration of which elevates the man of genius above average men. It is by reason of his judgment and will alone, and nothing else, that the man of genius is such. What is judgment? A form of activity, which develops independently new conceptions out of conceptions that have been derived from impressions on the senses or some other action of the judgment that has previously taken place. The material upon which the judgment works is supplied by the memory, which on its side draws upon the impressions on the senses, and by the understanding, which interprets the impressions on the senses. The laws in accordance with which the judgment works form collectively what we call logic. Accordingly, the impression on the senses is taken up by the centres of sensation, interpreted by the understanding, retained by the memory, and, lastly, worked up by the judgment in accordance with established rules, those, namely, of logic, into new conceptions, which are no longer dependent on any immediate sensible perception. An exceedingly simple illustration will make this clear even to a reader who may never have heard anything about scientific psychology. My senses, feeling and vision, gave me once upon a time the impression that rain was falling upon me in the open and that the skies were black. My understanding combined these separate impressions on the senses and interpreted them into the conception that it was raining from the clouds. My memory retained these impressions and their interpretation. Once more I happen to see heavy clouds gathering and all the other conditions (temperature, height of the barometer, direction of the wind, etc.) repeated under which it has been accustomed to rain. My judgment will in such a case take the conception supplied to it by the memory of rainfalls in the past, the conditions of which have been established by the understanding in accordance with the logical law furnished by experience, that the same causes under the same conditions lead to the same effects, and work the new conception from it. This new conception, of course, will be, that it is going to rain immediately, yet it is one which is not due to any impression on the senses, since in truth a process which is only to occur in the future cannot as yet produce any

impression on the senses. That even the judgment is due to the action of an organ, of a brain centre, and cannot be a phenomenon outside the sphere of matter, as that otherwise so great and profound thinker Wundt assumes, is surely proved by the fact that it becomes organized, and therefore automatic, alike by frequent repetition in the individual and by inheritance in the race, just as is the case with every other action of the brain or spinal cord centres. To abide by the simple illustration I have given, we will also find that even very inferior animals, such as worms actually, are capable of the judgment that it will rain, when certain definite phenomena occur, for when rain is threatening they take the precautions against it that are usual in their case and crawl away, bury themselves, etc. The more perfect, however, the centre of the judgment is, so much the more easy will it be for it to form new conceptions out of the material supplied to it by the senses, the memory and the understanding, and so much the more remote will these new conceptions be in respect of time, space, and nature, from the impressions on the senses which have given the first impulse to their formation. It will, consequently, be distinguished from the less perfect centre of judgment by this fact, that whereas the latter in forming new conceptions, and therefore judgments, is loath to withdraw from its secure foundations, namely, the impressions on the senses and the recollections, the former, by a wonderfully bold form of activity, elaborates a judgment out of the impressions on the senses and recollections, treats this offspring of its own creation again as a product of equal value to the material of the senses, memory and understanding, and derives further judgments from it by the laws of logic. This derivation of judgments from other judgments and this accumulation of new conceptions on the frequently extremely small foundation of an impression on the senses are, too, driven by it freely and easily to limits that appear to the average man unattainable. This relationship between the impressions on the senses and the judgment may be rendered intelligible if we say that this action on the part of the judgment resembles in the case of the average man a pyramid whose base is the impression on the senses and whose apex is the judgment, but in the case

of the man of genius, on the other hand, an inverted pyramid which rests upon an apex of sense-impression and spreads out into a basis of judgment. The possession of a powerful centre of judgment, accordingly, gives one the capacity of divining from a single impression, a glance or a sound, the most intricate interdependence of things, of looking forward from the present into the future, frequently the far-distant future, of recognizing from a phenomenon the laws to which it is subject, and of knowing in advance the results that will follow from the mutual operation of different phenomena even before these have been directly observed. A centre of judgment like this gives, to express it in popular language, a knowledge of the world, supremacy over circumstances, the most certain guidance alike of oneself and of others, wisdom, discernment and inventive power. Judgment, in the sense in which I have hitherto used the term, pre-supposes the assumption of causality; that is to say, the assumption, that every phenomenon has some cause, that similar causes have under similar circumstances similar effects, and that the magnitude of the cause stands in direct proportion to the effect. It is only on this assumption that the material, which is furnished to it by the memory, has any value for the judgment, and that the latter is able to form out of the images in the recollection new conceptions and draw conclusions from the past as to the future, from what is near as to what is remote, and from what is sensibly perceptible as to what lies beyond the direct scope of the senses. I am, however, able to conceive of a centre of judgment so powerful as not to require for its work any material from the memory, or therefore even causality, but capable of working up the impression on the senses directly into new conceptions that would depend upon the recognition of a special law in every new phenomenon, and would be more than simple projections of images of the recollection into the future, being really completely individual conditions of the consciousness not repeating anything that was known before. I shall not, however, wind this thought out, for I must confine myself within the limits of the human elements found at the present day.

Next to the judgment, we have stated the will to be the

most essential constituent element in the man of genius. What is will? In seeking to answer this fundamental inquiry, I shall be so bold as to differ both from Kant, before whose overwhelming greatness in other matters I humbly bow, and also from Ribot, whose profound sagacity and thoroughness as an investigator otherwise I gladly acknowledge. When Kant explains to us that the will is at once the commanding element, the law and what obeys, he gives us a transcendental definition which is hardly more intelligible or lucid than the theological explanation of the unity of God's three natures. Ribot's definition, according to which the will would seem to be the reaction of the Ego upon the influences of the external world, is much too broad and virtually embraces the whole of consciousness, which, in so far as it is due to impressions on the senses, and derives its entire contents from impressions on the senses (the inquiry, whether it is necessary for us to accept *à priori* conceptions, I here leave untouched), is also merely a "reaction of the Ego upon the influence of the external world." A definition, however, which compels us to adopt the assumption that consciousness and will are identical, cannot be right. Any one who relies upon the point of view of natural science will inevitably agree with me in saying that the will is the action of a centre whose single duty in the organism consists in the production of contractions of the muscles, or, in other words, in the giving out of impulses to movement. Philosophically speaking, the definition of the will is closely akin to that of Schopenhauer, for Schopenhauer applies the term will to the power that induces movements both in the case of an organism and also in the case of inorganic things, and as every phenomenon, when ultimately analyzed, is found to be a movement or a resistance to some movement, that is, a passive movement, it follows that the will would be the essence of all phenomena, that is, of the world. To this length, however, I do not go. In spite of the theoretical similarity or, for aught I care, even identity between the falling of a stone and the steps of a man, it is nevertheless justifiable to practically separate these two forms of movement, one from the other, and not to apply the same designation to what induces the fall of the stone and to what

induces the step of the man. We shall, accordingly, only term the causes of the impulses to movement will in the case of organisms, and make the will reckon merely as an attendant phenomenon of life. That muscular contractions can be induced, not only by the aid of the will but also by means of other influences, as, for instance, a galvanic current, is no proof of the incorrectness of my definition; for, in the first place, there is still room for this, namely, that the same phenomenon may be called into being by different causes, and, secondly, we are not shown that the will is not also a kind of electrical phenomenon, just as in truth we also speak of "nerve-currents," "nerve-power," and "nerve-fluid," expressions all of which lead up to the conception that the centre of the will is a sort of electrical battery, and the impulse to movement transmitted to the muscles a sort of electrical current. It may perhaps be objected that the will also calls into being phenomena which cannot be properly called muscular movements; for instance, it is undoubtedly the case that efforts of the will are made when seeking to recollect some matter, and yet memory is not a muscular action. To this my reply is, that even in that case the memory, as a matter of fact, obeys the will only very imperfectly, and that I am of opinion that the will acts only very indirectly on the centre of the memory in this way, namely, by inducing contractions and expansions, that is, movements of the bare muscles, not subject to the immediate control of the consciousness, which exist in the blood-vessels that conduct blood to the centre of the memory. That organ is, by the more plentiful supply of blood, excited to greater activity, and it may then frequently furnish to the consciousness the desired image of the recollection which was not obtainable from it so long as it contained a lesser amount of blood and was working less actively. I shall continue, accordingly, to hold the view that no psycho-physiological experience known to me contradicts the proposition that the will is the action of an organ which gives out impulses to movement.

The questions have now to be answered, how the simple impulses to movement given out by the will induce convenient movements, and how the will itself is prompted to its specific

form of activity. The answer to these questions will be found at hand, if we bear in mind that life generally is a very complex phenomenon, and in particular that every higher form of vital activity is brought about by the united co-operation of different organs. The will merely induces contractions of the muscles—nothing else. The centres of co-ordination, however, receive the impulse and impart it to those muscles which have to be contracted in order to produce the contemplated convenient movements, and in order to produce them not merely in the desired form but also of the desired degree of strength. The centres of co-ordination, therefore, play the same part in regard to the will as in an electrical apparatus the interpolated commutators, relays, and resistance coils do in regard to the battery. What is it, however, that has taught the centres of co-ordination to know which muscles have to be contracted that some definite movement may be produced in the contemplated manner and strength? The experience of the individual being and of the whole race since its origination, an experience that is organized and works in automatic fashion. And how is the will stimulated to its specific kind of action? By the influence of all the other centres; by induction, I might say, to make use of a conception from the department of electrical science. A mere impression on the senses may, without any interference on the part of the consciousness, induce the will to impart an impulse to movement; there arises a reflex movement, which is quite wrongly termed "involuntary." Involuntary, that is to say, uncontrolled by the will, it is not; it is merely unconscious. The automatic action of the high centres, that is, the emotions, likewise stimulates the will. This cause of an action on the part of the will gets to the consciousness with the same want of distinctness that we formerly described as a peculiarity of the emotions. Finally, the self-dependent, new and non-organized activity of the consciousness, that is, the judgment, cogitation, may also give rise to some labour on the part of the will. The judgment itself does not "will"; it merely forms a conception of some simple or complex movement or other, or even of a long series of movements following one upon the other, which appear to it to be appropriate to some

given set of circumstances. Should the organism be healthy, normally developed and in equilibrium, then this conception will suffice to stimulate the centre of the will to impart an impulse to movement. That the movement is fulfilled is again learned by the consciousness, by the impressions of the muscular sense communicated to it. The process is therefore as follows—the judgment forms a conception of movements, the will gives the impulse to them, the centres of co-ordination impart the impulses in appropriate fashion, and the muscular sense transmits the movement that resulted back again to the brain. Only the beginning and the end of this process are of a conscious character, namely, the conception of the movement which the judgment has elaborated and the knowledge of the completed movement. What lies between is withheld from the consciousness. How the conception of movement got transformed into a movement it does not learn. Inaccurate observation, however, has obscured this perfectly simple and clear succession of organic acts. Because of the fact that the conceptions of the movements and the resulting movements come within one's consciousness, the will itself has been located in the consciousness. And yet experience teaches that even the most lively conception of a movement is necessarily followed by a movement, and that therefore the judgment is by no means the same as the will. In a certain disease, called neurasthenia or nervous debility, the centre of the will is withdrawn from the influence of the judgment. In such a case movements might quite well be conceived and yet not carried to completion. The expediency of taking a book or going across the street may be completely recognized and yet the power may be lacking to guide the arms or legs to the movements requisite for these acts ; it does not follow, however, that the patient is paralyzed, indeed he may be perfectly able to fulfil the orders of others. A man so afflicted is wont to say—" I will but I cannot." This is, however, incorrect. The truth is that he thinks but does not will. The centre of judgment is at work, but not so the centre of the will. It is very frequently said of individuals that they show a weakness of will-power. As a rule, that is incorrect. If there is a weakness, it is generally in the centre

of the judgment. The latter lacks the capacity of elaborating definite conceptions of movement to a sufficient degree of sharpness. For this reason the will also may fail to come into action. Should, however, some stranger's judgment communicate to them such conceptions of movement, and therefore give advice or commands to them, they will complete the movements vigorously, with certainty and irresistibly, a proof that their centre of will is sufficiently strong. The same thing holds good in those cases in which a conflict in the will or an action of the passions apart from the influence of the will is spoken about. The conflict takes place not in the will but in the judgment. We do not possess "two wills which contend the one with the other," but two conceptions, of which neither is clear and distinct enough to be able to stimulate the will to any impulse. Whenever the one conception becomes perfectly distinct, it gains the mastery over the other and sets the will into action. Hamlet is not a person deprived of will but deprived of judgment. His centre of judgment does not manifest itself sufficiently strongly to elaborate any definite conception of convenient movements. Were it able to do this, his will would also have the power of completing the movements, that is, taking it for granted that the centre of the will is sound, about which Shakespeare does not give us any intimation. And when something is done or omitted to be done in a passion, that the intelligence apparently forbids or enjoins, it is not because "the will has become impotent," as it is put in novels, but because the automatic, emotional action of the highest centres was stronger than their free, cogitational action; because the conscious conceptions of the judgment have not prevailed over the half-conscious or unconscious organized work of the brain centres, or because the will has received the stronger stimulation from their automatism, and accomplished those images of movement which have been automatically produced, and not those which have been produced in the full light of consciousness. The will has therefore become powerful enough; it was merely the judgment that was impotent to hold the automatic work of the highest centres in check and to influence the will with its free, conscious work.

We shall not go into this interchange of the judgment and the will, but shall in cases of indecision or of passionate acts done against the advice of the intelligence, or of mere habit, speak not of weakness of the will but of weakness of the judgment. Real weakness of the will we ought only to assume at such times as, in the case of a healthy person (not such a person, therefore, in whom the connection between the centres of the judgment and of the will is disturbed, and in whom, though both are indeed powerful enough, they are incapable of influencing one another in a regular manner), perfectly clear and definite conceptions of movement on the part of the judgment are not fulfilled, or only imperfectly and hesitatingly completed, and where also impulses of passion continue to be mere feeling, wish and desire, though they do not come into action. In truth, the only standard by which to measure the strength of the will is its capacity to overcome resistance. It is not the muscles which triumph over obstacles, but the will, the extent of the stimulation which it gives to the muscles. Crack-brained individuals, in whose case the centre of the will is morbidly excited, and imparts to the muscles impulses of extraordinary strength, accomplish acts that would not have been considered possible. Feeble old persons or women will break iron rods, rend chains asunder, and be able to resist efforts to overcome them though assailed by several sturdy attendants. If the same persons were able to act likewise in a sound state, they would be counted as the strongest individuals of the age. They would not be so able, however, even though they were in possession of the same muscular system as they had at the time of their madness. From this it is evident that great feats of strength depend not nearly so much on the muscles as on the strength of the impulse which is transmitted to them by the centre of the will. The first resistance which the will has to overcome is the frictional resistance which is offered to it by the tissues, nerves and muscles. The shorter the path of the nerves is which has to be taken into consideration, the smaller and more slender the set of muscles is which has to be stimulated, so much the less is this resistance, so much the more feeble may the impulse

of the will be which is necessary for the production of a movement. The finest transverse muscles that are possessed by us, taking them in order, are those of the larynx, of the eye, of the mouth, of the face, and of the hand. Even a very weak will, therefore, is sufficient to set these muscles into motion and to talk, to make grimaces, to look furious or happy, and to gesticulate. To this, accordingly, the acts of ordinary persons are confined. It is, of course, a more difficult thing to impel the coarser sets of muscles of the arms to contract, and a still more difficult thing to impel those of the legs and of the trunk to contract. A stronger impulse is required for that, and, consequently, a more powerful exertion on the part of the centre of the will. Persons whose wills are really weak rarely, therefore, get so far as to allow their talking and gesticulating to be followed by some undertaking which requires walking or an exercise of the arms. The most difficult thing, finally, is the completion of those movements the object of which is to overcome external forms of resistance, whether on the part of inanimate substances or living creatures. In such a case, the will has to triumph over not only the internal frictional obstacles which affect our consciousness like a kind of inertia or disinclination to motion, but also the forces of Nature (for instance, that of gravity) or the impulses of a second party's will; it has consequently to be in a position to give out vigorous impulses, more vigorous at all events than those of the antagonistic will, if the resistance to be overcome proceeds from a human being. Should the will not be strong enough for this purpose, then the conceptions of movement formed by the judgment, however clear and definite they may be, will remain unexecuted. The knowledge of what is wanted to be done will be perfect, and the desire to find it will also be of the liveliest order, and yet it will be left undone. What is called want of perseverance and cowardice is nothing else than an outward manifestation of weakness of will. A man will undertake a thing and yet fail to persevere in it, or even draw back before it is fairly begun, if either through ignorance of the matter its difficulties are over-estimated, or though it is thoroughly known its difficulties are imagined

to be insuperable. In both these cases the judgment fails to clearly form the conceptions of movement indicated to it under the given circumstances, because the memory represents to it images in the recollection of cases in which the will had shown itself too feeble for the overcoming of similar difficulties. Lukewarmness and cowardice seem, accordingly, to be due to knowledge by experience of one's weakness of will.

A powerful development of the centres of the judgment and of the will is, therefore, the organic basis of the phenomenon which is termed genius. A one-sided development of the centre of the will is not of itself sufficient to constitute a man of genius. Those who are giants in respect of will-power will be in a position to overcome all obstacles that may be opposed to the carrying into execution of their conceptions of movement, whether these should assume the form of things or men, of laws or morals; but they will not be able to elaborate independently conceptions of movement that are important and adapted to their purposes. Hercules accomplishes his twelve labours, but only after Eurystheus has imposed them on him. With the assistance of his will alone, even under the most favourable circumstances, a man will only become one of Alexander the Great's generals, a Seleucus, a Ptolemæus, or one of Napoleon's marshals; he will become the famous minister of some clever monarch, or, and in truth much more frequently, the immortal sovereign of some clever minister; whilst, if the worst should happen, such a person will become a debauchee, whose orgies will resound through all lands and histories, or a criminal who will inspire all his contemporaries with horror; a Cæsar Borgia or a Schinderhannes. In the former case, conceptions of movement are carried into execution which the centre of the judgment of some clever second party has elaborated, in the latter the half-conscious or quite unconscious emotional stimulations of his own centres. A one-sided development of the centre of the judgment, on the other hand, will by itself alone produce a man of genius, only he will have a different character according as the centre of the will also happens to be less or more developed along with the centre of the judgment. A man of genius through judgment with-

out any special force of will may be a great thinker, a philosopher, mathematician, perhaps, even a scientific investigator. For in the case of their forms of activity, very slight dynamic obstacles have to be overcome, very feeble impulses to contraction of the muscles to be imparted; their judgment does not require to elaborate coarse conceptions of movement, but manifests its extent and power in another way, by deriving, namely, from the impressions on the senses, endless new and abstract conceptions; from a simple study of numbers the Pythagorean principle, the theory of numbers and the integral and differential calculi; from the fall of an apple the law of gravity; from the results of the perceptions of the consciousness a theory of knowledge; and from the facts of experience relating to the doctrine of development and palæontology, Darwin's system of evolution. I am unable to agree with Bain's view, according to which philosophical cleverness holds the first place in the classification of genius. My theory impels me to give to the mere thinker and investigator the lowest place in such a classification; for their greatness is due simply to their judgment, and this again by itself and without the co-operation of the will is not in a position to convert the conceptions elaborated by it, however wonderful these may chance to be, into sensibly perceptible phenomena. Even the mere expression or writing out of them calls for some activity on the part of the muscles, and therefore an impulse on the part of the will. Should the will of a man who is a genius in respect of his judgment not even be sufficient for the prompting of the acts of writing and speaking, then will his most sublime conceptions always continue to be purely subjective conditions of the consciousness of which no one but he himself would have any idea. They would be molecular processes of motion in his brain, and only perceptible by others to the degree in which such processes might be experienced by some other brain through space and by it be repeated, so far as, that is, this kind of perception, which would be a kind of thought-reading of the highest order, might be considered to be possible.

Should a clever judgment be combined with a centre of the will of a good average quality, then we will have the

great investigator in the experimental sciences and the inventor. The nature of the endowments and activity of these two classes of individuals is practically identical. The maker of experiments, like the inventor, deduces laws from the phenomena he observes, and devises material conditions which would enable him to allow the laws discovered by him to operate according to his pleasure. The difference between them is not a theoretical one but only a practical one. The former is satisfied with combining those circumstances and appliances which will show him whether the processes that are perceptible to his senses are in harmony with the conceptions of his judgment, whether a law discovered by his brain centres does hold good constantly in the world of phenomena; while the latter, on the other hand, tries to form such arrangements as shall have the exclusive aim of promoting the best interests of humanity in the highest sense of the term. At the same time we must be careful here to avoid one mistake. An invention, a discovery, need not necessarily be the result of a combination of a clever judgment with an extensive amount of will-power. Chance may have had a share in the work. The monk Schwarz was not trying to discover gunpowder when his mixture of sulphur, nitre, and charcoal exploded in his mortar, and Professor Galvani had not the remotest thought of finding out an unknown force in Nature when he placed the frog's leg that he had severed from its body on a copper hook. I do not, however, on the whole feel inclined to give to chance credit for more than quite a small share in the great discoveries and inventions. It is always essential that an extraordinary judgment should be present that an unknown phenomenon may be properly observed, that it may be at once noticed that it cannot be satisfactorily explained in the light of the knowledge possessed at the time, and that its causes and conditions may be discovered and new conceptions may be deduced from it. Chance, accordingly, will only prove a starting-point for some discovery or invention at a time when it has an exceedingly cogitational person as a witness. The emotional average man with his automatically working brain stares stupidly when in the presence

of phenomena that are not clothed with his traditional and organized conceptions. Had Schwarz' mortar exploded in the presence of an average man, he would simply have crossed himself, or have fancied that he had seen the devil, and would have drawn from his observation at most this lesson, that he would have to take care never again to touch sulphur. Gunpowder such a one would certainly not have invented. Various happy accidents occur daily before the eyes of men, and have indeed always so happened. Until, however, some extraordinarily powerful judgment shall have taken them up, they cannot be understood, or their laws and applications discovered. The whole mass of phenomena upon which are founded the sciences of biology, chemistry, and physics, and the inventions in the departments of steam-power, electricity, and mechanics, has been the same for countless ages, and was just as available for the men of the Stone Age as for us. But in order to understand and master it there was need of a development of the judgment to an extent that had not been reached either by primitive men or by the men of ancient times. Likewise undoubted also is it that at the present day we are surrounded by phenomena of the most wondrous kinds, regarding which we never at all think, which we do not know how to interpret, and the laws of which we do not try to find out, because there is no one among contemporary individuals who possesses a judgment that is powerful enough to deduce from the forms in which they are perceived by our senses any conception as to their causes and possible effects. It is, however, extremely probable that men of genius will make their appearance later on by whom this will be attainable, nay even easy of accomplishment, and our descendants on the earth will be unable to comprehend how we could be so simple and stupid as to allow the most noteworthy phenomena to escape us, just as we fail to understand why mankind did not thousands of years ago hit upon explosives, steam-engines, and applications of electricity. If now we turn our attention away from the co-operation of chance, which, as I have sought to show, is but small and trifling, there still remains this fact to be noticed, that attempts, to use Bacon's words, "to put

to Nature truly sensible questions," which are framed with some conscious and definite aim, and to which an answer already divined beforehand is expected, such as the methodical labours of a Robert Meyer, a Helmholtz, or a Koch, pre-suppose a clever judgment and a properly organized will centre. The association of the centre of the will is necessary, because when making experiments and inventions the essential point to be attained is in truth to render conceptions elaborated by the centre of the judgment perceptible to the senses, which representation to the senses, however, can only be effected by muscular activity, which again only comes to pass through impulses on the part of the will.

Lastly, if the centre of the will is developed to the same extraordinary degree as is the centre of the judgment, if, accordingly, we have in front of us a man who is at once a genius in respect both of judgment and of will, then we shall have to salute one of those phenomenal individuals who alter the course of the world's history. A man of genius of this class finds expression, not in thoughts and words but in deeds. His judgment elaborates new, individual conceptions, and his will is active and strong enough to convert them, in spite of all obstacles, into actions. He scorns the more ready means of rendering his conceptions perceptible to the senses, those, namely, of sounds and signs, and strives after such as necessarily entail the overcoming of very great degrees of resistance. He does not, accordingly, speak or write, but acts, that is to say, commands the services of other men and of the forces of Nature for the fulfilment of his conceptions. Such a man of genius becomes among the human race what he likes, and does what he likes. He discovers continents. He conquers countries. He rules over peoples. He traverses a career comparable with those of Alexander, Mahomet, Cromwell, and Napoleon. No human power can set any bounds to his sway, unless he chance to have among his contemporaries an equally great or even greater man of genius in respect of judgment and will. He can only be wrecked by some force of Nature that is mightier than the force of his will. Columbus might have been brought to nought by a hurricane; disease overtook Alex-

ander; Napoleon suffered disaster through a Russian winter. The centre of the judgment is able in its conceptions to overcome even Nature itself. The centre of the will can only triumph over such powers as are weaker than its own.

The organization of a man of genius in both judgment and will such as we have mentioned has, as one of its features, this fact, that there is lacking to it, to a greater or less degree, in extreme cases altogether, what are called feeling and artistic sense, the craving after beauty and love. His powerful centres convert all impressions into clear conceptions and deduce from them perfectly conscious judgments. An automatic form of action is, if at all, to be found only in their own way and not according to any fixed inherited patterns. From dim, half-conscious or quite unconscious impulses the man of genius is almost entirely free. He is in no way of a sentimental turn. He gives one on that account the impression of being hard and cold. These words, however, indicate nothing else except that he is purely cogitational and not emotional. Another feature accompanying this form of organization is this, that the man of genius is hardly accessible at all to the matured thoughts of other brains. His centres are adapted for original work, and not for the imitation of other people's work. They must find themselves face to face with the raw material of sense-perceptions in order to work it up, in their individualistic manner, into new conceptions. Products of the judgment that have already been digested by it, that is to say, a raw material of sense-perceptions that has already undergone the process of conversion into conceptions in the brain centres of others, or in other words, if I may say it, the very mental peptones which the average man is alone able to assimilate, are repugnant to them.

At this point of my considerations a troublesome question rises up before me. If genius is judgment and will in an extraordinary degree of perfection, if its form of action consists in the production of new abstract conceptions and in their concrete realization, what shall I say then about the emotional man of genius, the poet and the artist? Have I then any general right to concede that poets and artists may

in any case be men of genius? Well, this right is as a matter of fact an exceedingly doubtful one. Let us just for the present recall to mind what emotion really is. Impressions on the senses are guided to the appropriate centres of the senses; these centres of the senses impart a state of activity to other centres of the senses, namely, those that are commonly accustomed to receive impressions conjointly with the others; they stimulate the centres of the will and of co-ordination, and lead by way of counter-effect to some act or other on the part of the organism, even though it should be merely a facial expression, a change in the rhythmic action of the heart, or a cry; all this taking place automatically, in accordance with traditional custom that has become organic, and without any interference on the part of the judgment, which receives only a dim partial knowledge, an indefinite suspicion of the processes in the inferior centres. Now, it is these processes, which take place beyond the sphere of the consciousness, that are the emotions. Poetry, music, and the plastic arts have no other task except that of producing emotions. Every one who practises these tries with their assistance to stimulate our organisms to processes which are in reality induced by a definite succession of impressions on the senses, and which we experience as emotions. The lyric poet endeavours by means of words, the musician by sounds, the painter by colours, to direct our brain centres to the work that they are wont to perform when the senses convey to them the impressions which proceed, it may be from a beautiful and love-inspiring being of the opposite sex, from an enemy, from a destructive natural element, from a suffering fellow-creature, or from a particular season of the year. The more correctly they can comprehend and copy the characteristic features of processes that are able to be represented by their art, namely, the intellectual expressed in words, the optical and the acoustic, so much the more nearly will the emotions excited by them approach the emotions that the processes themselves would have produced. A production in the way of poetry, painting, etc., which does not excite any emotions in us, will not be recognized by us as a work of art, even though our judgments were to convince

us ever so much that it is cleverly devised, and has been produced after the application of a considerable amount of diligence and skill and after the surmounting of very great obstacles. The effect of a work of art, therefore, depends upon an automatic form of activity of our centres ; the latter however, is simply stimulated by impressions which the organism and the entire series of its predecessors have been accustomed to receive; this excludes from the work of art anything like real novelty; in order to produce any effect, it has to take for its essential contents old, usual, and organized impressions. As a peculiarity of the man of genius, however, we have learned to recognize his capacity of forming new conceptions that deviate from those hitherto known, and of converting these into phenomena that are perceptible to the senses. But how is this to be reconciled with that form of art which is exclusively occupied with this, namely, the repetition of old impressions that have become the property of the race and are now organic in it ?

The answer to this rather nice question does somewhat embarrass me, in so far as I am compelled in stating it to fall foul of generally accepted views. Without doubt, the emotional man of genius is not really a genius. As a matter of fact he does not create anything that is new, does not furnish the human consciousness with any richer contents, does not discover any hitherto unknown truths, and does not exert any influence upon the world of phenomena. At the same time, however, he possesses certain axiomatical psycho-physical qualities, that convert him into an exceptional being and distinguish him from the average man. The centres which furnish the emotional forms of activity have in his case to be more vigorously developed than in ordinary organisms. The result of this is, that in his case not only an impression on the senses excites his automatically-working centres to a more intensive state of activity, but also that his consciousness perceives more of this activity, because it proceeds in him, so to speak, with more noise, to a larger extent, and with greater notoriety. I am able to make this perfectly plain by calling in the aid of an earlier illustration. An emotional man of genius is also merely a mechanical

musical-box, and not a voluntarily inventing and voluntarily playing virtuoso. So far, so good; but there are musical-boxes and musical-boxes, from the tiny musical toy, which gives out a consumptive and hardly audible murmur, up to the mechanical organ whose thunder is able to make the very walls shake. What we have, accordingly, to assume is, that the automatically-working centres in the case of the emotional man of genius do indeed play mechanically but incomparably louder than in the case of average men; that the former is the organ, while the latter are merely toy boxes. And one result of the power of his mechanism is that consciousness plays a greater part in the activity of the emotional man of genius than it does in the case of ordinary persons; but, be it noted, not by creating and influencing but by perceiving. His judgment is unable to change anything in the automatic work of his centres, though it can look and observe how it is going on. In this limited sense the emotional man of genius also succeeds in promoting that novelty and originality which I have laid down to be the work of the man of genius. He produces, it is true, merely emotions that are traditional and long-accustomed among the human race, but he produces them more powerfully than other men were able to do before him. The results of his work, accordingly, are new in respect of degree if not also in nature.

The place of the man of genius as a member of a class will be determined by the value of the tissue or of the organ upon whose exceptional degree of perfection they depend. Any other system of classification is unnatural and arbitrary, even though its principles might be as ingeniously laid down as those upon which Bain relies. The more exclusively human a brain centre is, so much the more superior will the man of genius be who is the result of its special development. It is hardly necessary to explain this thought by a reference to what has been already stated. The development of bone tissue is unable to constitute a man of genius, for big bones are not as such merely human, but are also peculiar to whales and elephants; just as little can the development of muscular tissue, such as distinguishes a Milo of Croton, but neverthe-

less fails to raise him above the rank of the stronger animals; even the centres of the senses are not adapted for the formation of the organic basis of a man of genius, for in the matter of keenness of sight the condor will always surpass even the most perfect human eye and centre for the sensation of light; in the matter of acuteness of hearing man will never be able to compete with certain species of antelope, and so on. Even the highest centres are nevertheless not purely human, though their state of perfection should happen to include more than a mere automatism. For all automatic reactions on the part of the organism against impressions from without are also open to the higher animals, and such reactions come into their consciousness only too obviously as emotions. Acts of love, hatred, revenge, fear, and sympathy, with the psychical excitations that accompany them, may be observed by us in dogs or elephants, just as much as in men, and the only difference between animals and men in these matters is this, that human emotions can be excited even by artificial imitations or symbolizations of natural phenomena, whereas, on the other hand, those of animals can only be excited by these phenomena themselves; wherefore in the production of the emotions in man the interpreting action of the judgment, and consequently also of the memory and understanding, plays a much greater part than is the case under the same circumstances with animals. On the other hand, the judgment is purely human, so far as it goes out beyond the simple immediate interpretation of the impressions on the senses, so far as it forms out of these conceptions to which there are no corresponding processes occurring in the view of the senses, and therefore so far as, in order to express the matter in technical language, it makes abstractions, and from such abstractions in turn deduces other abstractions. Judgment, in this limitation of the term, is not possessed by any other animal except man. So too, in none of the other animals is the organic dependence of the centre of the will or the centre of the judgment so pronounced as it is in the case of man. The centres of the judgment and of the will consequently produce by their high state of development a truly human genius, one who is the highest expression of the

organic perfection of mankind hitherto attained. The loftiest position among men of genius is, therefore, occupied by those in whom genius in respect of judgment and genius in respect of will alike concur. These are the men of action, who make the world's history, form nations intellectually and materially, and direct their destinies for them for a long time to come; the great lawgivers, organizers, political reformers, revolutionists with distinct aims, or aims that are attained by them, and even generals and conquerors too, if they act in accordance with sharply-defined conceptions of their own judgment, and not half-conscious impulses or other people's suggestions. In respect of information these most distinguished men of genius occupy quite as high a position as those of the next category, they deduce from their perceptions abstract conceptions with quite as much certainty, and therefore discover, with quite as much reliability, that interdependence of the phenomena which is not perceptible to the senses, as well as their causes, their laws, and their results, remote and remotest, in time and space. Nevertheless, they possess over and above them the capacity of realizing their conceptions, not only in spite of the opposition of inanimate matter, but also in spite of living organisms, in spite of the opposition of men. The consequence is that they are able to arrange their judgments in such a way that they can, with a view to their being rendered perceptible to the senses by the will, form conceptions which have for their contents nations, nay, the whole of humanity, and which they can only realize in this way, namely, by making the will-centres of nations, nay, of humanity, dependent upon their own will and judgment.[1]

[1] Some of my critics persist in maintaining that there is a contradiction between this passage and the statement on p. 49 to the following effect—"There is no necessity, therefore, that we should have an original politician, legislator, or statesman. The more commonplace each of this class of persons is, so much the better is it for him, so much the better for his nation." I entreat these critics to read a little more attentively both passages, and then also p. 51. If they do so, they will see that I include under the work of men of genius all sorts of devices in the way of new organizations, laws, and political systems, and yet am careful to distinguish the realization of these thoughts from the thoughts themselves. The "great lawgivers, organizers, and political reformers," who combine both genius in respect of judgment and genius in respect of will, constrain nations irresistibly to adopt their new conceptions, but that is rarely of

The second class includes those men of genius in respect of judgment who have a good but not clever development of the will, the great investigators, makers of experiments, discoverers and inventors. What causes them to lag behind men of genius of the first category is their want of capacity to make use of men as the material for the realization of the conceptions of their judgment. They will, therefore, be able merely to realize such conceptions as have for their contents inanimate matter. Their wills are strong enough to overcome dead obstacles, but not so living ones. The third class is made up of those who are merely men of genius in respect of judgment, without any corresponding cultivation of the will—the thinkers, the philosophers. By virtue of their information, their wisdom, their gift for divining processes which are not perceptible to the senses, removed both in time and locality, they mark themselves out as legitimate men of genius of the same family to which the political leaders and the discoverers belong. But they are imperfect in this respect, that the conceptions, which their judgments have elaborated to a glorious state of perfection, remain in their brains, or at most become perceptible to the senses in the form of written or spoken words. Any direct influence on men or inanimate things they do not exercise. Phenomena of movement they do not induce. Some other person's will has first to be stimulated by their conceptions before the processes in their centre of judgment will induce processes beyond the sphere of their organism. Below these three categories of cogitational men of genius, below the subduers of men, the subduers of matter and simple thinkers, come last of all the emotional men of

---

service to the welfare of such nations. If, however, they are merely men of genius in respect of judgment, then they will produce the effects that are specified on p. 51—they will persuade, preach, educate; they will gradually bring the masses to have confidence in their novel thoughts, and should these have already become common property, should even the Philistine be already able to conveniently copy them, because he has inherited them from his father and grandfather, then it will be easy for a "politician, lawgiver, political reformer" of the current type, that is to say, one who has become so by virtue of seniority, to realize the thoughts of the man of genius, which have ceased to be novel, having already become commonplace. That this kind of reform is the more acceptable for the nations, every one will readily join with me in conceding.

genius, who are distinguished from the average masses by the greater degree of strength of the automatic work of their centres, though not by any individual exceptional development of the same; and these last cannot arouse any new conscious conceptions or any conscious impulses to movement, but merely half-conscious or totally unconscious emotions. Under this head of emotional men of genius, poets again occupy the first place; for, to begin with, their judgment participates very largely in their work, and, secondly, they produce their effects by a means that is by far the most suitable of all the means known to the senses for rendering perceptible conditions of the consciousness, those highest contents of all art, the means, namely, of language. While cultivators of the plastic arts and musicians have to confine themselves to the comprehending and reproducing of such characteristics of the conditions of the consciousness as are perceptible to the senses, which allow these to be understood only very generally, the poet is in a position to sharply define them and so to specialize them that they can hardly be mistaken for any other allied conditions of the consciousness. The co-operation of the judgment can at most be dispensed with by the lyric poet, whose "eye rolls in a fine frenzy," and in his case the impressions rouse the centres of speech automatically to action without going round about by way of the consciousness. In all other kinds of poetry, on the other hand, the poet has to form with his judgment conscious conceptions, the distinction between which and those of the thinker consists merely in this, that they have as their object the representation of inherited emotions, and not the divination of imperceptible relations between phenomena.

This arrangement of classes is the only natural one, for the postulates upon which it is based are of an organic character. The usual estimate of the different categories of men of genius, however, is without doubt very markedly different from it. Cogitational natures estimate the man of genius according to the services which he confers on the race as a whole, and which they are able to comprehend, while emotional natures do so according to the strength and pleasantness of the emotions which he is able to arouse in

them. In a primitive community the brave and mighty warrior is the most important member. Strength of muscle and of will, and therefore courage, will accordingly be valued as the most glorious gifts a man can have, and their fortunate possessor will be awarded a place above all the other members of his race and will be honoured as a demi-god. In a community of that kind, manifestly, no great thinker or investigator, no philosopher, no mathematician, no maker of experiments, will be able to lay claim to any estimation. If a Descartes or a Newton were to arise among a tribe of Red Indians, he would be looked upon as a useless member of the band, and every lucky bear-hunter, every warrior who already wore several enemies' scalps at his girdle, would be given a place high above him. And from the point of view of utility this would be perfectly justifiable, for what is required by a race of Indians at the stage of development attained by them is not a mathematician or a metaphysician, but meat and security. It is a survival of this savage and barbarous way of looking at things that in our so-called civilization the soldier is accorded the foremost rank, and that a reverence is shown for his uniform, for the warlike tattoo marks on his collar, his sleeves, and the breast of his tunic, which might be perfectly natural and comprehensible in man's primitive state, but is without any rational significance in our present more highly cultured condition. And it is just as natural that emotional natures should measure the value of a man of genius according to the emotions which are aroused in them by him. They are incapable of any original individual thought, and yet, on the other hand, the automatic, organized activity of their brains may be quite a strong one. Their consciousness is, therefore, filled not with clear conceptions but with the half-obscured, vague images, repeatedly described in this work, in the shape of which the automatic action of the brain centres is perceived by the consciousness. The real genius, that is to say, the man of genius in respect of judgment, demands of their highest centres a conscious, non-organized, non-inherited work, and this they are unable to furnish. The man of genius in respect of judgment, therefore, has no existence at

all for them. The emotional pseudo man of genius, on the other hand, arouses the automatic activity of their centres and consequently gets apprehended by them; he is for them a source of sensations, and as life is measured according to its contents in the way of sensations, the emotional man of genius is for them at once a sublime dispenser of life. Women (and those men who resemble them in their intellectual development) will, therefore, always esteem an artist more than a thinker or investigator, and among artists the musician will very naturally occupy the highest position in their eyes, because the emotions which music arouses in them also excite the sexual centres, and consequently are the most deep-seated as well as the most pleasant. The painter also and even the actor will be accorded a very high place by them—the first because his art does not arouse any kind of cogitational activity, and can therefore be enjoyed by them without the difficulty of thinking; and the second, for the same reason and this additional one, that the effect of his activity in imitating and realizing emotional states of mind is intensified by the human effect of his individuality. The poet will be esteemed by emotional natures, and therefore primarily also again by women, simply in proportion to the degree in which his work is purely emotional and not cogitational; the lyric poet, therefore, more so than the epic, and the illustrator of external exciting processes more so than the analyzers of mental affections. An estimate of the value of genius like this cannot naturally be employed as a standard by us. If the strength of the emotions excited by the man of genius is to be the element that determines the rank which he is to occupy, then, to cite an example, a man would have to rank his sweetheart, or a woman her lover, higher than any man of genius you please, whom humanity has up to the present time produced, for it is undoubted that Juliet will arouse in Romeo and Leander in Hero more powerful sensations than Goethe or Shakespeare, Beethoven or Mozart, to say nothing naturally about Kant or Laplace, Julius Cæsar or Bismarck. And I also cannot help thinking that, if the question were put to such interesting couples, they would not hesitate to declare their Juliet or their

Leander to be the most glorious of all the people of genius imaginable, past, present, and future.

It is not then the effect of one individuality on another that should be the standard by which to determine their relative importance, for this effect is one that is quite different according as the persons upon whom it is made to operate are more or less highly developed, more or less cogitational, but the more or less exclusively human character of the brain centres, the extraordinary development of which is the psycho-physical basis of their phenomenal form. And since the highest and most human brain centre is the centre of judgment, the development of the judgment alone constitutes a true man of genius, although no doubt a corresponding development of the will is also required in order to render the work of his centre of judgment perceptible to the senses of others. The man of genius in respect of judgment is so far the highest expression of human perfection. Whether the organic development of mankind will proceed still farther, and what direction it will take, are matters that at most a great man of genius in respect of judgment might divine by virtue of his capacity to draw from given circumstances conclusions that will apply to those that are most remote in space and time.

VI

SUGGESTION

THE reader has by this time learned what my thoughts are on the subject of the mechanism of human progress. The latter does not advance with an extended front and with officers for companies and sections. A perfectly contemptible minority of pioneers go singly to the front, force their way through the brushwood, notch the trees, set up signboards, and lead the way; it is only afterwards that the main body comes, first in small groups, then in dense bands. Each step of progress that humanity makes is the work of some man of genius, who performs for his race the same services that the chief brain centres perform for the individual to whom they belong. The man of genius it is who thinks, judges, wills, and acts for humanity at large; he it is who works up ideas into definite conceptions, who hits upon the laws, of which phenomena are merely the expression, who responds to outward impulses with the appropriate movements and keeps extending the contents of consciousness. The general mass of mankind does nothing else but imitate the man of genius; it merely repeats what the man of genius has done in a better way. These individuals, who are of a perfectly normal constitution, who are well and proportionately developed, act in this way on the spot and come very near to the standard of their model. Such individuals are called clever. Those individuals, again, who fail to come up to the average standard of the types of humanity of the day, through being surpassed in some quality or another, only succeed in attain-

ing it at a later period and after much exertion, and in their case the imitation is neither elegant nor faithful. These last are the Philistines.

But now let me put the question, what exactly is the way in which the man of genius exerts his influence upon the masses? How does he succeed in leading these on to imitate his thoughts and mimic his actions? Superficiality has on its lips the ready answer—"Force of example! Imitation!" With these ejaculatory phrases it is thought that all has been said which need be. In reality, however, they explain nothing; they neither enable us to understand why it is that human beings, and especially the lower animals, have that impulse towards imitation, nor do they show us by what means it is that one being induces the other to allow his brain centres and muscles to work in practically the same manner as his own do. Here is a man who thinks something or does something. Here again is another man who inwardly repeats the same thoughts, outwardly mimics the same action. I cannot but regard the thought or the action of the one as the cause, the thought or the action of the other as the effect. I see the example and also the imitation. But between these two is a yawning gulf. The tie which connects them I fail to see. I am not yet in a position to know how the abyss between the cause and the effect is to be bridged over. We stand in such a case before practically the same difficulty as we do when studying kinematics or the science of pure motion in space and time, which no doubt lays it down that there is such a thing as motion, and discovers its laws with a greater or a less degree of certainty, but which again has never made even the slightest attempt to determine how the motion of one body can be transmitted to some other, or how the energy of one atom can jump across an intermediate space not containing matter to some other atom, in such a way as to have an effect upon it. The inability of the human intellect to grasp the idea, how energy or motion, which in its nature is incorporeal and only a condition of matter, is able to stalk across a space which is devoid of matter from one atomic particle to another, forms without doubt the strongest conceivable objection to

the atomic theory, which since the time of Anaxagoras has influenced all philosophy and forms the basis of our present-day systems of mechanics and chemistry; for it was just this inability which necessitated the hypothesis of that utterly incomprehensible thing called ether, which is supposed to surround all atoms, and which has induced some of the most profound intellects of all ages, not excepting even the present day, such as Descartes, for example, to prefer the theory of the unity and continuity of matter throughout all space to the old atomic theory.

Psychology, I fancy, will surmount this difficulty much more easily than will the science of pure motion. The former can appeal to a phenomenon which has only begun to be appreciated in these latter days, a phenomenon which includes in itself a perfectly satisfactory explanation of the frequently verified fact, that human beings influence one another in a spiritual manner, that human beings act in imitation of other human beings. This phenomenon is what is called Suggestion.

One word of explanation will be desirable for those who may not have learned what exactly is understood by the term Suggestion in Psychology. We have seen in our last essay that all motion is prompted by the will, and that it is to conscious efforts of the judgment, or to unconscious, automatic efforts of an emotional character, that the will imparts its impulses to motion. If now those efforts, which put the will into a state of activity, proceed not from the individual's own but from some stranger's brain, if the will of an individual makes itself the servant of a stranger's judgment or of a stranger's emotions, and executes ideas of motion which may have been worked out in the centre of some other nervous system, in such a case we say that his actions have been suggested to the latter individual, that he is labouring under the influence of a suggestion. Suggestion is naturally to be studied under the most favourable circumstances when it is acting in a morbidly exaggerated manner. This is what happens in the case of hypnotism. An individual who is susceptible of being hypnotized, and who is consequently as a general rule of an hysterical constitution, is thrown into this

extraordinary state of the nervous system, a state which even now has not been sufficiently explained. The other party, who has hypnotized him, then says to him—"To-morrow morning, at eight o'clock, you will go to the house of Mr. Mayer, number so-and-so, X street, and stab him with a kitchen-knife, which you will take with you." The hypnotized individual is now awakened, and goes his way. He has not the slightest remembrance of the events which took place about him during his state of unconsciousness. He may not be acquainted with Mr. Mayer, perhaps too he may never in his life have been in X street, and above all may never have inflicted the slightest injury even on a fly. Nevertheless, when the following morning comes, he takes up a kitchen-knife, even stealing it somewhere or other if he must do so to get it, goes to X street, rings up Mr. Mayer at eight o'clock sharp, and would most certainly stab him but for the fact that Mr. Mayer has doubtless been advised of the experiment, and taken the necessary precautions. The individual, accordingly, is seized, disarmed, and questioned as to his intentions. As a general rule he avows on the spot his criminal intent, though presently he starts off with attempts at concealment, and only confesses after some pressure has been applied. If the information is desired why he has taken upon him to commit murder, he will, that is, if he is by nature a simpleton, either reply, "Because it was so fated," or else maintain an obdurate silence; but if, on the contrary, he is at all clever or smart, he will devise the most remarkable stories to supply to himself and the others a reason for his action. In such a case Mr. Mayer becomes an old enemy of his family. He has been secretly stirring people up against the individual; he has been slandering him, injuring him in his occupation, and so on. Never for a moment does it occur to him that his action was prompted in him, suggested to him, by a stranger's judgment. And suggestion will operate for longer periods than simply from one day to another; cases have been known of its power being maintained for so long a space even as six months. An act which has been suggested to a person in the hypnotic state has been completed in all its details half-a-year subsequently, on the very day that was

pre-determined, and that though the individual affected, during the space that elapsed since the making of the suggestion under the influence of which he laboured, was without the very slightest suspicion of his state. The suggestion too does not necessarily have to assume the form of a definite command. A hint suffices. One may assume a mournful expression or speak a few random words in a whining tone to a hypnotized individual. Without hesitation the latter also will adopt the most pitiful look, and speak and act just as a man is accustomed to do who is in a state of the most profound depression. One may say to him in fun, "Do you like being a soldier?" and he will immediately conduct himself—and this is equally true when the subject is a lady—as if he were a soldier, and will begin to give out commands, to drill, perhaps even to swear, and in short will do everything which in his thinking is proper for a soldier to do. One may hold out to him a glass of water and ask—"What do you think of the flavour of this wine?" The individual becomes sensible of a taste like that of wine, and finds himself able, supposing him to be a connoisseur, to specify the kind and the year of its vintage; and if he is allowed to drink a considerable quantity of it, he will actually become completely intoxicated. I might adduce a hundred other examples of suggestion of a similar kind, on the subject of which, especially in France, there is already quite a literature in existence, and in the discussion of which such first-rate observers and investigators as Charcot, Bernheim, Luys, Dumontpallier, and Maguin have busily engaged.

In the case of all these phenomena the cause is simply a morbid super-sensibility. On a healthy human being suggestion is unable to act with the same degree of intensity. It is impossible to convince such a one that water is wine, or that he is a cardinal when in reality he is only a student barrister, and it would be a difficult matter to put it into his head to make a gift of his property by formal legal documents to some stranger, with whose name possibly he is not even acquainted. And yet, that in this case also suggestion exercises its influence, though it is true in a much more limited degree, and that the ideas and acts of such a one

also are under the influence of suggestion, are facts which scarcely admit of any doubt.

My desire has been to explain the way in which one human being is able to influence another, how one copies the thoughts and acts of the other, but until now I have simply substituted one word instead of another, and spoken of "Suggestion," instead of "Force of Example and Imitation." What exactly, however, is the essence of suggestion, and in what way does it come into existence? The answer which I have to make to this question is naturally only an hypothesis, but it appears to me to be a complete one, and it is not contradicted by any fact which has been hitherto noted. Suggestion is the transference of the molecular motions of one brain to another, in the same way as one string communicates its vibrations to another string in its neighbourhood, or as a heated iron rod, when held close to a cold one, imparts to the latter the motions of its own molecules. Since all ideas, judgments, and emotions are processes involving motion of the molecules of the brain, it naturally follows, from the fact of the motions of the molecules being transferred, that the judgments, ideas, and emotions must also be transferred, the mechanical bases of which are those very motions.[1]

In order to make this process quite clear, I have only to add a few short details. As we have already seen in the preceding essay, our organism has one and only one means of making the state of its consciousness, and therefore also its judgments, ideas, and emotions, perceptible to the senses of others, and that is by movements. Particular states of the consciousness induce particular movements, which, therefore, are the expression of the former. We become accustomed to refer the movements to the states of the consciousness associated with them, and from the former to arrive at conclusions regarding the latter. A movement is either a

[1] Mr. Charles du Prel published a book in the year 1891, which seeks to explain the phenomenon of Thought-reading by means of an hypothesis which repeats, almost word for word, my hypothetical explanation of suggestion as stated above. I might accuse him of plagiarism, but prefer to content myself with the assumption that my work, which was published six years previously to his, has been all that time unknown even to a writer so extraordinarily well read as Mr. Charles du Prel.

direct or a symbolical expression of a state of consciousness. If, for instance, one man strikes another with a blow from his fist, the muscular action involved is the direct expression of a state of consciousness which comprises this idea, namely, "I will strike." If, on the contrary, one were to let his head droop, and to sigh, these movements of the muscles of the neck and chest would be the symbolical expression of a state of the consciousness which might be termed depression or pensiveness. The symbols of the states of the consciousness may also be classified into two sets, namely, the natural and the conventional. Natural symbols are such as are organically referable to definite states of the consciousness. The latter cannot occur without bringing the former in their train. Yawning and laughing, for example, are the natural symbols of lassitude and cheerfulness. The constitution of our consciousness has this peculiarity, namely, that in a state of lassitude, that is to say, in consequence of an accumulation in the tissues of the products of decomposition occasioned by work (*e.g.* lactic acids), those nerve centres which have the power of weakening the respiratory muscles become excited, and induce a spasmodic action of these muscles, which action it is that we seek to indicate by the expression yawning. Since the main features of the organism are the same throughout the human species, nay, to some extent in all living creatures, it follows that the natural symbols also remain the same throughout the human species ; they can be understood by all men, and in part even by the higher animals, and the knowledge, which is derivable merely from observation of one's own personality, is quite sufficient to enable their significance to be understood, and to fix upon the states of the consciousness which the symbols in question respectively indicate. Conventional symbols, on the other hand, are such as are not organically referable to the states of consciousness which they are supposed to represent, and are not necessarily induced by them, but have acquired their significance merely from its having been universally so applied to them. Nodding the head and beckoning with the finger are conventional symbols of those states of the consciousness which comprise respectively the ideas of "I agree to that," and "Come here."

The tacit agreement in accordance with which we attach their peculiar significance to these movements is an arbitrary one (and yet perhaps it is not perfectly arbitrary, since conventional symbols are rather derived from natural ones as well; but this is not the place to enlarge upon this idea), and as a matter of fact they do not have the same significance among all peoples. The Orientals, for example, when they desire to indicate assent with the head, move it not as we do from above downwards, but from right to left and back again. The best and most important example of a symbolical movement of the conventional kind is language, that product of the muscular activity of our organs of respiration and speech. In order to fix upon the state of the consciousness, of which language is the expression, one must have learned to associate the one with the other, and for this the knowledge acquired from an observation of one's own personality is insufficient. The very cleverest person would never guess that "Fu" meant happiness if he were unacquainted with Chinese.

The molecular movements of the brain, which originate states of the consciousness, induce therefore movements of the muscles. These latter movements are brought within the comprehension of some other person's brain by the aid of his senses; and for this purpose all his senses are of course serviceable. Some movements and the traces which they leave behind them, for example, those of writing, appeal more particularly to the sense of vision, while others appeal to that of hearing, and others again to that of touch. The sense receives the impression, passes it on, and starts the process of its interpretation, that is to say, induces some centre to work up the impression into an idea, and puts the consciousness into that very state of which the muscular movement, which was brought within the comprehension of the sense, was the expression. Illustrating this process by a reference to mechanical principles, it may be described thus—Changes are induced by the phenomena of movement in the sensory nerves, which in their turn occasion changes in the sensation-apprehending organs of the brain, which again excite the centres of consciousness to molecular movements, the nature

and strength of which is determined by the character of the excitation, as well as by the nature and strength of the molecular movements of the other brain which originally induced these muscular movements. Thus it is that by the aid of the muscles on the one side, and of the senses on the other, the state of one brain is mechanically transferred to another, or, in other words, that suggestion operates.

In order that one brain may in the way that has just been depicted assume the molecular movements of another brain, and consequently repeat the latter's judgments, ideas, emotions, and will-impulses, it must not itself be the scene of molecular movements of its own of a different nature and of as great or greater a degree of strength, in other words, it must not itself engage in hard mental labour, just as when a vibrating string excites movement in another it only does so when the latter is at rest or in a very feeble state of vibration, and cannot excite either a stronger string or one which is vibrating more violently in such a way as to reproduce its own tone. The more insignificant organically, therefore, that a brain is, so much the more readily does it obey the excitation to movement which proceeds from some other brain ; the more developed and powerful it is, the more energetic its own processes of movement are, so much the greater is the resistance which it offers to the foreign one. Under normal conditions, then, the individual of more perfect development operates by way of suggestion on him that is of a less perfect type, although the reverse is not equally true. Of course, the processes of movement of even less perfect brains may be combined together, and thereby attain such a degree of strength as to overcome the processes of movement of even a very perfect brain. If large masses of human beings happen to experience and express the same emotion, then even individuals who are mentally strong and original may be unable to resist them. They will be constrained to participate in the emotion, even though they should exert themselves ever so much to prevent the springing up of this condition of the consciousness by discordant conceptions and judgments. That suggestion operates most easily and with the greatest amount of result in the case of hypnotic

individuals is explained by this fact, that in this condition of the nervous system the molecules of the brain execute the very slightest motion of their own, and are in a particularly unstable state of equilibrium, and therefore may be brought by the very least impetus into a state of movement the nature of which will be determined by the form and strength of the excitation.

The impressions on the senses, by which suggestion is brought about, may be perceived by the consciousness, but it is possible, nay, probable, that molecular movements are also being constantly excited in the brain by such impressions on the senses, of which one is not in any way conscious. The London Society of Psychical Research has published report after report in which this fact is established beyond all doubt. An individual, who is in the same room with some one else, draws on a black-board figures which the latter has in his mind. Be it noted that the individual who draws them has his back turned to the person who is thinking of them, that the latter also utters not a word, and that, generally speaking, there is between the two no communication that is perceptible to the senses. In other experiments, one individual wrote down words, numbers, and letters of which another thought. Frequently these experiments were successful, on other occasions they failed. Nevertheless, the successes were sufficiently frequent to warrant the exclusion of all ideas of chance. The society in question is a serious one, and consists of men of acknowledged integrity and to some extent of the learned professions. It is not addicted to spiritualistic frauds, and though it has indeed placed itself in a somewhat unfavourable light by its researches into the phenomena of ghosts, it would, nevertheless, be wrong on that account to put an equally low value on the rest of its work. Unconscious suggestion may be acknowledged as a reality all the more readily because it is susceptible of a satisfactory explanation on the basis of facts that are firmly established. Every conception in which a movement is implied (and there are no other conceptions, for even the most abstract are ultimately composed of images of movement) as a matter of fact excites this movement,

even though it should be in but the slightest degree imaginable. The muscles, that have to complete the movement in question, receive quite a feeble impulse, and the highest centres become conscious of it through the muscular sense, which sends back the information that the impulse has been received. The process must be conceived to be somewhat as follows, namely, that the memory, the understanding, and the judgment, when they elaborate a conception, cause an innervation of the muscles that are to take any part in it, and that the conception only begins to attain its full intensity when the judgment receives information of the innervation having been accomplished. It was Stricker of Vienna who first accurately observed and demonstrated this fact, though originally, it is true, only with respect to the production of conceptions of sound. If, says that learned pathological experimentalist, the letter B, for example, should happen to be thought of, then in virtue of this conception an innervation is caused in the muscles of the lips, which co-operate in order to produce the letter B. The conception "B," therefore, is, as a matter of fact, an image of the movement of the lips by which the B is produced, and a trace of that movement also appears, though naturally only very slightly, in the lips. What Stricker says about the movements of the muscles of the apparatus of speech also very likely holds good of those of all the other muscles. Should the conception of running appear in the consciousness a sensation of movement will be experienced in the muscles of the lower limbs, and so on. The fact that it is not every conception of a movement that is immediately followed by the movement itself is due to this, that in the first place the impulse which is imparted to the muscles concerned by the mere image of movement is too weak to induce their effective contraction, and that, secondly, the consciousness opposes a conception of hindrance to all images of movement the actual accomplishment of which is not contemplated. Should the conception be a very lively one, or should the consciousness not be possessed of the strength and practice requisite for the elaboration of conceptions of hindrance of a sufficient degree of intensity, then the image

of movement will in fact be sufficient to excite at least a distinctly perceptible sketch of the movement itself. Words thought of are expressed in murmurs; there is such a thing as talking to oneself; a series of movements thought of is indicated by the hands and arms; gesticulations are indulged in. Talking to oneself and gesticulation, those qualities of lively persons or of persons insufficiently trained to self-control, which however are also observed in cold-blooded and well-educated individuals on occasions of specially violent excitement, are obvious confirmations of the correctness and universality of Stricker's law of "images of movement." But what is so transparently perceptible to the senses in the case of talking to oneself and in gesticulation happens constantly and in every conception, though in a degree that is very slight and not usually perceptible to our senses, in a conscious way. A word about which we may chance to think is, as a matter of fact, formed by us with our organs of speech; a movement which we may chance to conceive in our minds is, as a matter of fact, completed by our muscles in a way that indicates it. Now, since we only think in words and other images of movement, I may say that we actually do express all our thoughts in words and gestures. As a rule, of course this unconscious talking to oneself and this unintentional play of gesture are not heard and seen. They would be so, however, the moment that we either got senses sufficiently acute or became possessed of apparatus after the style of the microscope and microphone, which could make the slightest movements of the muscles of the apparatus of speech and of the limbs, face, etc., plainly visible and audible. But who will tell us that our senses, or at all events the senses of many specially endowed individuals, do not nevertheless apprehend these feeblest of movements? Conscious one does not, of course, become of these, but that of itself won't serve as proof that the event does not really happen. For we know by experience that an impression on the senses must at the outset possess a certain degree of strength in order to be communicated by the centre of perception to the consciousness, and that even very strong impressions on the senses remain unnoticed by the consciousness

if the latter fails to apply its special attention to them, but that such impressions on the senses thus left unnoticed by the consciousness, either through its not being sufficiently excited or through its being inattentive, nevertheless do exist and are worked up automatically, in an emotional manner, by the brain apart from the consciousness. It is, therefore, not only possible but very probable that our minds are uninterruptedly influenced by all other men's minds. Unnoticed by the consciousness, yet in a way that the brain centres can perceive, all our human surroundings, both near and remote, talk and gesticulate freely at us, millions and millions of gentle voices and pretty gestures press themselves upon us, and we literally fail, amid the embarrassing turmoil, to hear our own words, unless our voice should happen to be powerful enough to drown the sound of the humming. The consciousness of men generally works upon our consciousness, the molecular movements of all other brains are communicated to our brain, and it has to accept their rhythm, unless it can oppose to it another of greater liveliness, although even such a one must doubtless be modified by, if in truth it is not made to accommodate itself as a whole to, the rhythms buzzing around it.

This would explain unconscious suggestion. Let us then leave it and return to conscious suggestion, which probably is not the more important but is at all events the more surely brought within the reach of our comprehension. Conscious suggestion, then, takes place in consequence of all the manifestations by means of which conditions of the consciousness find expression; most frequently by word of mouth, but also by acts that can be observed. A thought uttered aloud arouses, by the mechanical process explained above, in the brain of the reader or hearer the self-same thought, and a completed act arouses in the will of the spectator the self-same act. Only the minority of original individuals, the men of genius, will have the power of entirely withdrawing themselves from this influence. Suggestion is the essence of all education, all instruction. The as yet undeveloped brain of the child becomes fashioned according to the excitations to molecular movement administered to

it by its parents and teachers. Through suggestion it is that examples alike of morality as of depravity produce their effects. The general mass of a people perform acts of love or of hatred, of culture or of coarseness, of humanity or of bestiality, according as the one set or the other is suggested to them by the powerful individuals of the period. What is it that is meant when talk is indulged in about popular spirit or national character? These are words devoid of sense. National character varies with every age. Popular spirit changes from day to day. Are examples necessary? Here are a few. The German people were in the last generation tenderly sentimental, romantically enthusiastic, in short, emotional. They are in the present generation severely practical, coolly deliberate, inclined rather to action than to talk, calculating rather than giddy, in short, cogitational. The English people were in the first third of this century morally degenerate; they guzzled, swore, practised unchastity and flaunted their faults in the light of day; now-a-days they are prim, temperate to abstinence, and in the highest degree respectable; their popular ideals find expression in temperance societies, in philanthropic efforts to rescue the fallen, and in religious devoutness of the eye-rolling sort; they avoid objectionable expressions in conversation and indelicate implications in behaviour. So complete a change has been wrought in the comparatively short period of thirty or fifty years. How then can it be believed or maintained that the styles of thought and action of a people are the result of definite organic peculiarities in them? Peculiarities of that kind could only be changed very gradually and over long periods of time. We have to deal here, then, with a matter that is of quite a different nature from what professional popular psychologists have hitherto regarded it to be. We have to deal here with suggestion. The great human phenomena among a people suggest to them what is called the popular spirit and the national character, and is erroneously considered to be something lasting and unchangeable, although it is nevertheless being constantly touched up by individual minds. The circumstances must be conceived of in this way, as if quite a small number of exceptional men

were standing in front of a people or even of a race, just as Bernheim is wont to stand in front of a hypnotized hysterical patient, and engaged in suggesting to the people or the race thoughts, feelings, and actions which are imitated in thought, feeling, and action, as if they had sprung up originally in the consciousness of the masses. Should these exceptional individuals suggest virtue and heroism, then the world will see a people of knights of the Holy Grail or Winkelrieds; should they suggest vice and shabbiness, then the history of the world will have to tell of the decline and fall of a Byzantium. A Confucius trains up a nation of cowards, a Napoleon the First one of fighters and conquerors. The man of genius fashions the nation after his own image, and whoever desires to study popular spirit will have to do so not in the masses but in the brains of their leaders. What undoubtedly is organically represented in a nation is its greater or less amount of solidity. All its thoughts and actions are certainly suggested to it, but should the nation happen to be of a vigorous constitution it will obey the suggestion intensively, while should it happen to be of a weakly nature it will obey it in a half-hearted manner. There is the same sort of difference as between a steam-engine of a thousand horse-power and one of only a single horse-power—we have an identical mechanism, identical motive forces, and an identical shape, but the one will remove mountains while the other will only drive a sewing-machine. In the same way, one nation will be mighty in virtue and vice, another insignificant alike in good and in evil; one nation puts great powers at the service of its men of genius, another only small powers. But what dictates their application to these organic powers is the suggestion which proceeds from the exceptional individuals. Not popular spirit then ought to be spoken about, but at most a popular body, a popular fist or a popular stomach. On the other hand, I am certainly of opinion that it is in the organic nature of a people to produce men of genius more rarely or more frequently, but this is a point with which I shall deal in a subsequent chapter.

The homogeneousness of the views and sensations within a people falls to be explained therefore not by any organic homogeneousness, but by the suggestion which operates upon

all the separate members of the people through the possession of the same historical examples, the same living heads of the nation, the same literature. In this way also the inhabitants of large cities acquire an identical mental physiognomy, although as a rule they have the most various origins and belong to an indefinite number of races. An inhabitant of Berlin, a Parisian, a Londoner possesses psychological features which distinguish him from all individuals not belonging to his city. Can these be organically founded in him? Impossible. Why, the population of these cities is a mixture of the most manifold ethnological constituents. They rest, however, under the influence of the same suggestions, and on that account necessarily exhibit that harmony of thoughts and actions which is so striking to all observers. Aberrations in respect of taste and manners, moral epidemics, currents of hatred or of inspiration which at any given period carry away whole peoples irresistibly, only begin to become comprehensible when suggestion is recognized as a fact.

We have seen that the chief means for the transference of conceptions from one consciousness to another is the use of words. Words, however, are merely conventional symbols of states of the consciousness, and this gives rise to a great, frequently insuperable difficulty with regard to the sensible representation of conceptions that are perfectly new. A man of genius elaborates in his consciousness a conception which previous to his time has never been made up by any other brain. What shape will his efforts to express this new and original state of the consciousness and to make it perceptible to the senses of others take? Evidently a form of words. The signification of a word, however, is a matter that has been established by agreement. It forms a sensible representation of a state of the consciousness which has been known in earlier times. It awakens in the hearer merely the old conception that has always been associated with it. If then the hearer or reader is to accept it as a symbol, not of the conception which the word has hitherto expressed, but of some other one as yet perfectly unknown to him, a new agreement will have to be entered into with him, and the man of genius would have to strive to impart to him

the new notion to which he had applied the old word in another way, by a reference to similarities or antitheses. This can generally only be done approximately and almost never perfectly. Our language shows traces in almost every word, in almost every turn of speech, of this anxiety on the part of original exceptional individuals to transfer new conceptions to the brains of the masses by the aid of the old symbols. All figurativeness of expression owes its origin to this anxiety. When the same root, as in the German word *Minne*, signifies first of all remembrance and then love, it discloses mental labour on the part of some original man of genius, who, in order to express a new conception, that of unselfish, faithful tenderness, has had to avail himself of a word which up to that time had expressed another conception of a more homely order, though always superficially related to it, that, namely, of simple recollection. Every man of genius would require in the first instance a new language of his own, if he is to render his novel conceptions properly perceptible to the senses. In consequence, however, of the fact that he has to avail himself of the language lying at his disposal, that is to say, of the symbols of earlier states of the consciousness on the part of other individuals, confusion is frequently enough the result, for he gives his words a different meaning from that which the hearer gives them, with whom until further instruction they can only have their established signification. The man of genius pours in all truth new wine into old bottles, with this aggravating circumstance, that he who receives the bottle can judge of the wine only from the look of the bottle, and not by uncorking it and tasting its contents.

The nature of speech, the circumstance, that it symbolizes old and oldest conceptions and has to give a figurative signification to the roots of its words, in order to make them fitted, whether badly or well, for the designation of new states of the consciousness, forms a powerful obstacle to the transference of the thought of a clever brain to the brains of the masses. The latter necessarily feel inclined to confuse the new figurative signification of the word that has been deepened in its meaning and applied in an original sense by

the man of genius with its old literal signification. The old and oldest conceptions continue to survive among the new ones in a disturbing and confusing manner. Popular ideas associate the axis of the earth with a thing that is apparently formed somewhat after the style of the axle of a wagon, and the electrical current with a fluid which runs along the inside of a wire as water runs in a leaden pipe, and in many cases in which the man of genius has intended to make his meaning clear by certain words, he has simply made it more obscure by arousing in other people's minds, not his real conceptions but such as have frequently been diametrically opposed to them. That, however, is just another of those human imperfections which we are unable to alter. Perhaps our organism will some day yet become developed to such an extent that the states of the consciousness will no longer require to be expressed by conventional symbols, but shall be communicated directly. In that case, the original brain will no longer require the aid of words in order to impart its molecular movements to other brains; it may possibly be found sufficient merely to think a conception clearly and definitely in order to diffuse it through space like light or electricity and to suggest it to others. In that case, too, it would no longer be necessary to clothe a conception in the old patches of a language which compels us, for example, to express the conception of a whole, of which we are a part, by the word *nature*, which in its original signification means the producer, and so calls to our minds the conception of a mother, with all the attributes of a sexual kind required for the production of the species by the mammalian type of animals. Until we shall have attained, however, to this mythical state of perfection we must just rest content with our words and try honestly to understand each other, so far as this may in truth be possible.[1]

[1] Science makes rapid strides. In 1885, when this chapter was written, my theory of suggestion was something quite new, a true paradox. Only six years have elapsed since then, and yet this short period has sufficed to convert my bold paradox into a generally accepted piece of commonplaceness, which is no longer controverted, even by the official learning of the academies and universities.

VII

GRATITUDE

"A LIVELY sense of future favours," is the definition given of gratitude by the English satirist. His idea was to say something funny, but he has given us in reality an exhaustive explanation of the nature of this feeling. In all healthy and naturally sensible individuals, what lies at the root of gratitude is the evident or vague expectation of further agreeable actions. Should there be absolutely no hope at all of a continuation or renewal of the benefits, then all feeling of thankfulness towards the benefactor ceases, or if notwithstanding it does continue to exist, this is merely the result either of organic habit or of an artificial stoppage of the natural processes of reversion in the life of feeling, practised in consequence of the prevailing system of manners. I agree with the evolutionist philosophers, with Darwin, Spencer, and Bain, in thinking that all human feelings have their origin in their necessity or utility in the preservation of the individual creature and of the race. Now-a-days, for example, we experience love as something pleasant, and disapprobation of our actions in the public estimation as something disagreeable. This can be easily explained by the theory of evolution. Of two primitive men, one of whom had agreeable sensations in the processes of love, while they aroused in the organism of the other nothing of the kind, the first would have exerted every effort to procure such sensations for himself, while the second would have hardly bothered about them at all. The first would have left behind him many, the second only a few or no descendants. In the latter again

the organic peculiarity of the fathers would be repeated according to the principle of heredity, those who were eager for love would become more and more numerous, and those who were indifferent to love would become more and more rare, and by and by die entirely out, so that only such persons would ultimately survive in whose case love was associated with pleasant sensations. In the same way would that one of two primitive men to whom the estimation of his fellow-tribesmen was a matter of no concern have little hesitation in accomplishing actions that might provoke or injure them; his tribe would not have put up with it, and would have quickly enough prepared for him unfavourable conditions of existence, by chasing him away from them, or have cut the matter short by killing him; the other, on the contrary, who constantly paid attention to the effect that his actions had upon persons around him, would have hit it off all right with his tribe, would have received from it help and protection, and would thereby have lived more easily and securely, and have propagated more descendants, to whom he would transmit his organic peculiarity, with the result that in our present-day humanity only such individuals are to be met with in whom the thought of a hostile estimation on the part of the public excites a sensation of uneasiness which is strong enough to restrain them from actions which might awaken that kind of hostility. Is gratitude, however, an impulse which can be explained by the principles of evolution? Certainly not. Gratitude can never have been of any use to a primitive man, nor could it ever have procured for him better conditions of existence. He reaped no advantage from the possession of this feeling, and the want of it had as its result no kind of detriment. If the matter is critically considered, it will actually be found that an individual endowed with the disposition to gratitude would in consequence thereof be worse off than those who were free from it; for while he was throwing away his time with attentions and his strength with actions, which could not bring him any conceivable advantage, the others would be applying their strength and time to their profit. Gratitude was and is, therefore, in all cases in which it is not a feeling prompted by selfishness

and self-interest, and has the aim of enticing a benefactor by abjectness and flattery to further benefits, useless for the preservation of the individual and the race, and on that account could not become a natural impulse in human beings. How then is the fact to be explained that gratitude nevertheless lies at the root of the religious conceptions of humanity, that the gods were wont to be praised for the gifts which they bestowed upon men, that thankfulness for these gifts was manifested by them with sacrifices, and that the departed, their own forefathers as well as the dead heroes of the race, got grateful reverence paid to them? Simply by the gross errors of an ignorant mind. Mankind regarded their gods, dead ancestors and heroes, as living beings who still continued to have the power of being of use to them, and their feelings of loving devotion, their sacrifices and songs of praise, were not gratitude for past services, but urgent demands for future benefits. Even at the present day the superstitious fundamental conception of the existence of a personal God furnished with human qualities, and of the continuance of the individual after his death, produces powerful effects in people's minds, and occasions now and again, not sufficiently often, it is true, manifestations of gratitude for services rendered by the dead. In a far-off future, when this superstition, which has now become organized through hundreds of thousands of years of thinking the same thing, shall have disappeared from the brain of man, hero-worship in its present-day form will also have ceased, without leaving any trace behind. Perhaps even then memorials will be erected in honour of great men, their graves be kept in order and their anniversaries celebrated, though no longer with the conception of manifesting a love for their personality, of paying off a debt due to them, or of making some return for benefits received, but exclusively for purposes of national training, with the view of making the form of the hero who is celebrated act by way of suggestion upon the masses, and of prompting them to imitate his virtues, and because society will always experience the need of corporeally demonstrating in ideal forms those qualities that it has to demand of its members out of regard for its self-preservation.

If gratitude for an act is to have any sense or purpose it ought to be shown previously to the completion of such act. It would then perhaps have an influence on its origination, nature, and scope. But of what use can it be if the act has once been performed? What change can it then cause in it? how can it make it better or worse? When the Moor has performed his work, there is really nothing else left to him but to go, and, should he grumble about it, any one who has time for so superfluous a business may deliver a lecture to him about the laws of Nature, and explain to him that the present and future are unable to influence the past, and that a piece of work which has become objective remains for all time to come what it is, though the Moor, by whom it is performed, should subsequently make at it an exasperated grimace or a pleased expression. It would not be a proper objection, that the example of gratitude or of ingratitude, even though it should not be capable of exerting any influence on the act to which it has reference, may nevertheless, perhaps, have a decided effect on future acts; that the reward of veneration which has been paid to some predecessor may stimulate a successor to follow in his footsteps; and that the spectacle of ingratitude towards the departed will restrain those of a later generation from making efforts of an altruistic nature, which otherwise they would have undertaken. That is not the case. The man of genius performs his great deeds on behalf of humanity because he is compelled to do so and cannot do otherwise. It is a craving of his own organism that he satisfies. He would suffer if he did not fulfil its demands. That the masses of average men are benefited in consequence is not the determining element in his case. A stream roars along because the laws of hydraulics require it so to do. It is not, however, a matter of essential importance to its existence whether mills which draw from it their motive power are established on its banks or not. The picture of Scipio, seated on the ruins of Carthage, has never yet converted some possible saviour of his country in embryo into an Ephialtes, even though the conception of an old man who squats in a draught among sharp-cornered broken stones, and who on going farther will presumably stumble over heaps

of rubbish, or fall into some cellar-hole, ought to have a deterrent effect on all except only volunteer firemen. And I call upon our German publishers to testify whether the recollection of Camoens, whom his thankless countrymen allowed to perish in want and misery, has diminished poetical production to any real extent!

The reader has already discovered that gratitude on the part of one individual towards another is excluded from our present considerations, because it cannot be cited as an example of an unselfish emotion, which has no hope of any new reward and becomes of advantage only to the being who is thanked, and not in the least to the being who thanks, but only as a more or less prudent investment of capital from which good dividends are anticipated, and which therefore belongs, not to the philosophy of morals but to that of business. Only the gratitude which the masses show towards an individual with whom they have absolutely no personal acquaintance, from whom they have personally nothing to expect, and who perhaps is already dead, would be an instance in point. But for an approved pure and really provable example of this kind, which would not admit of explanation either on the score of national vanity or on that of inherited superstition, that is to say, which would not be traceable to selfish motives, the whole history of the human race will be searched through in vain.

No, such a thing as gratitude on the part of the masses, of nations, or of the human race in general, is not to be found and cannot be found, because it has no anthropological foundation. The man of genius, whose mental labour it is that keeps the species alive, who accomplishes in himself the whole progress of the species, and who represents the beginning of all new development on the part of humanity, has to dispense with all thanks. He must find his sole reward in this fact, that in thinking, doing, and creating he lives up to his higher qualities and brings his originality within his consciousness to the accompaniment of powerful feelings of pleasure. Any other satisfaction than that of the most intensive sensation possible of his own Ego exists no more for the most sublime man of genius than for the lowest form

of life that swims in a nutritive fluid. The man of genius frequently flatters himself with the conception of immortality. He is wrong. Immortality, which Klopstock calls a "fine thought," is something less than a fine thought, it is a sort of dissolving view of the phantasy, a shadow of one's own individuality projected into the future, similar to that which a tree casts far out over the level ground when the sun is low down on the horizon. At the moment that the tree falls its shadow also disappears. The conception of the perpetuation of one's name, the effort to secure to oneself fame after death, issues from the same source from which the superstition of the continuance of an individual's existence after death has also sprung. It is just another case of resistance on the part of the living individual to the cessation of his consciousness, one form of the impotent struggle against the universal law of the finiteness of an individual phenomenon, a proof of the incapacity of the thinking Ego, which recognizes its own existence, to conceive of itself as not thinking and as not existent. The man who creates great things, and has furthered the interests of his nation or of the human race in general, can surely at all events reckon upon this weakest and cheapest manifestation of gratitude, which consists in the perpetuation of his memory. Vain wish and vain effort! The memory of the human race is reluctant to keep up the name or the image of individual persons, or to prolong any feeble reflection of their individual existence even in their recollection beyond the natural limits of human life. How long do even the most famous names endure? As things are, mankind has not preserved any of the age of ten thousand years, and what are ten thousand years in the life of mankind, not to mention the life of our planet or of the solar system? It is only when living persons derive some material advantage by not allowing the recollection of definite individuals to vanish that the masses preserve a distinct remembrance of them; so it is with respect to founders of religions, or the ancestors of ruling families; for in these cases priests and monarchs have an interest in artificially restraining the masses from obeying their deeply-seated and in the end irresistible instincts of ungrateful forgetfulness. But where

no such interest holds sway, mankind makes haste to forget the dead, even though they should have been its greatest benefactors. It is a pitiable sight to observe the desperate efforts which the individual makes to withdraw his individual form from the influence of the law of annihilation. He piles up huge stones to make gigantic memorial erections, he moulds the metals to preserve the outlines of his shape, he writes his name on every page in books, he engraves it on marble and bronze, and he associates it with charitable institutions, streets, and towns. These palaces and statues, these books and inscriptions, are intended to proclaim this one name in the ears of men down to the remotest ages of the race, and to remind them that once a great man bore it, and that this great man had acquired for himself the right to be held in grateful veneration. The inanimate objects to which the individual entrusts the charge of looking after his memory do not perform their duty for any length of time. Even though they escape destruction, they lose their voice, and by and by cease to utter the name which they were intended to repeat to latest generations. The palace becomes of use to persons who invent some arbitrary story to account for its origin; they affix to the statue some title or other that they fancy; even in the name of a town they obscure that of the founder, as, for example, when they transform Constantinople into Stamboul; and they efface without concern the traces of the great man just as an unthinking child wipes out with a sportive finger the letters that are on a slate. And who will cast this at human beings as a reproach? Only he who is devoid of all sense for the plainest phenomena and conditions of organic life. The individual is of value only in his own sight, and not in that of Nature, nor yet in that of the universe. In the view of Nature he is merely a casting mould, in which matter is organically shaped; a station *en route* on the great road of development of matter from the inanimate to the animate. When the casting process is completed, the mould will be destroyed. When the intermediate station is left behind, it will be forgotten. What does endure in the mind of the individual and is destined for an existence without conceivable end, namely,

his propagating principle, tears itself free from him and starts a new and independent life of its own, which no longer requires any kind of connection with the organism in which it has originated; the parent organism, on the other hand, then falls to the ground like the blossom from which the fruit has been formed. An exactly similar process is repeated in the case of the mental functions of the individual. They break away from the organism, become objective and form phenomena on their own account, for the perfection of which it is in no way requisite that they should recall the individual who produced them; they are what is destined to endure, the propagating principle, so to speak, of the mental individuality, and should the latter have given up his best, should it have produced living thoughts and actions which could produce further effects independently and stimulate new life, then it will not be unfair that it should share the lot of everything living and life-giving and disappear. The ancient myth about Saturn, and how he devoured his children, owes its origin to a mistaken view of Nature. It is not the father who eats up his offspring; it is they who gain their sustenance at the expense of their parents. This example of excessive and heedless primitive selfishness has nothing shocking about it. On the contrary; it is at once terrible and grand, as is every powerful spectacle in Nature. In so far as the begotten takes over the vital germ from the begetter and carries it on farther into the future, it renews and rejuvenates the parental organism, though only to the extent of what is essential in it. This work of keeping up what is essential necessitates so great an expenditure of strength on the part of the new organism that it has none left for the preservation of what is unessential, that is, of the accidental qualities of the individual form of life.

The law, which I might call the reverse of the Saturnian—the law by virtue of which the begetter disappears in the darkness in proportion as the begotten moves into the light, admits of no exceptions. Just as there exists not the human being who has kept his remote ancestor alive in himself, so there is no human intellectual act which has travelled over the course of its development under the constant guidance of

its author. What knowledge do we now possess of those individualities from whose mental labours our entire system of morals and culture has sprung? How great a man must he have been who for the first time gave us fire! Who has preserved any memory of him? To whom does it occur to call him to mind with gratitude, when comforting himself in winter-time with the heat of a stove? How great a man of genius must he have been who first conceived the idea of getting rid of the accidental finding of plants and of reaping the necessary grain in a methodical way from the soil! Do we ever think of blessing his name when we are enjoying our daily bread? At the present day we still know the inventors of the telegraph, the steam-engine, and the railway. But these inventions are only matters of yesterday. A portion of the men are still alive before whose eyes they were made. How long will it be before Soemmering, Oersted and Ampère, Graham Bell and Edison, Papin, Watt and Stephenson, are all as much forgotten as the equally great or greater unknown inventors of the artificial production of fire or of agriculture, and before mankind will avail itself of its telephones and express trains, as it does fire and bread, without showing the slightest particle of grateful remembrance of its benefactors? And our inventors are in this respect no worse off than our mental philosophers, governors, statesmen, legislators, and artists. A truth is discovered and it remains the eternal possession of humanity, but with those who have unearthed it after a few generations no further trouble is taken. Specialists are still in our time aware with whom the various advances in mathematics, the natural sciences, and astronomy originated. But how many persons are there, even among the cultured and highly cultured, who would be able to say what personal share Pythagoras and Euclid, Hipparchus, Hero of Alexandria and Descartes, Aristotle, Roger Bacon and Harvey, nay even such recent human phenomena as Lamarck, Young, Leslie, Bell, Joule and Schwann, have each had in our knowledge of Nature and general view of the universe? Who were the human individuals with whom those Roman political institutions originated, the fundamental features of which are still at the present day preserved in our political constitutions?

What names had the lawgivers (not the codifiers) who laid down those principles of Roman jurisprudence which still at the present day govern our juristic decisions? The work still survives, but its author has become lost in oblivion or the subject of legends. The *Iliad* is still read, for the most part, it is true, by students of our high schools, who derive but little enjoyment from it, but Homer himself has become so completely lost to us that his very existence can be denied. The sagas of the Nibelungs still live and flourish, but their author has sunk into the oblivion of the past. It is no more in our power to conjecture who made the Venus of Milo than the name of the sculptor who chiselled the Apollo Belvidere.

Men of genius of the present day flatter themselves that from henceforth things will be different, but they do so in vain. Personal fame rests upon newspapers and books and inscriptions cut on metal and stone. All this will be wafted away by time like the ashes of a leaf that has been burned. A few thousands of brief years will run, and then all will be lost in oblivion. The human race, however, has doubtless still many millions of years before it. Bismarck will participate in the fate of the forgotten founders of states of antiquity, and Goethe and Shakespeare will sink to the level of the author of the Book of Job and that of the bards of the Vedas, but the German nation will become developed to greater heights of power, and *Faust* and *Othello* will continue to arouse deep emotions in men so long as the German and English languages are understood upon this earth.

"The traces of my earthly days the lapse of æons can't efface!" says Faust to himself with comforting self-conviction. Literally speaking, his words are true. His traces, that is to say, what he has accomplished, will not perish soon, if they are important. But he makes a mistake when he connects with the endurance of the traces he leaves behind him, the conception of the endurance of his individuality. He wrested a country from the sea? All right. A gladsome busy multitude inhabits it and takes delight in life and sunshine on it. But is it grateful to the man who constructed the dam and gave it the soil for its crops? Not in the least. Gratitude will not make the harvest more abundant or the land more

flourishing; there is no compulsion to entertain feelings of that sort, and therefore they are not entertained.

The theories of political economy lay it down that it is not their indispensableness for the life of man that determines the value of things, but the greater or less degree of facility with which they can be procured. Air is the most necessary thing that is required by man; and yet it has no value, because it can at all times be had without difficulty and because no work has to be performed in order to obtain what air is needed for the vital processes. What the man of genius produces may from this point of view be compared with those advantages that have no value. Once completed, once become objective, they form a constituent part of Nature itself, and become like the air that is breathed or the water that can be obtained without trouble, without recompense, and without thanks. The truth which one man has found out and expressed becomes accessible to all men; in the poetical work of art which one man has created, all men can seek emotions for themselves, if they happen to thirst for them; the invention, the political and social institution, which some human brain has contrived, or some human will realized, is found by all men so soon as they are born ready-made like the earth, upon which they move about, and the seasons, whose alternations interrupt the uniformity of time. What the individual requires and takes to himself of these truths and beauties, inventions and institutions, does not encroach upon their number, does not use them up, and does not withdraw them from any other person's enjoyment. He is quite right, therefore, to avail himself of them without anything in the nature of thanks or recompense.

And the men who labour for the masses have all the same no reason to complain about ingratitude when they and their works are forgotten, and when their fellows in the world and their posterity settle in some America discovered by them without ever cherishing another thought of the Columbus of that new foster soil. Their organisms produced their creations just as a maternal organism gives birth to a child—as they were unable to keep them buried within them, they found themselves compelled to thrust them forth when they had become mature. Moreover, every man of genius really finds

his recompense for even the greatest accomplishment in itself, nay, he actually only starts his work after being prepaid for it. For he has at his service the labours of all preceding men of genius, those nameless individuals, who were the authors of all our culture and morality, of all our conveniences and triumphs over Nature. He steps upon the shoulders of his predecessors, wherefore it is only fair that his successors should step upon his shoulders. He shows his gratitude to the forgotten pioneers and advancers of humanity simply in so far as he avails himself of the treasures they have left behind them, and he must not expect, therefore, that his heirs will feel grateful to him in any other way. Those intellectual advantages, which he finds at hand and out of which he can make his creations, have long ceased to bear the personal marks of their authors; why then should the man of genius not take comfort to himself on the subject in this idea, that those advantages also which he himself will produce shall, without their origin being traceable, become the common inheritance of the human race and increase the number of their possessions?

VIII

ON THE MATTER OF LITERARY FICTION

WHAT are the mutual relations which subsist between life and fiction? Does light literature proceed upon the observation of real life? Does not the latter much rather endeavour to use fiction as a model and to form itself in imitation of it? Which is the pattern? Which is the imitation? Do novels and plays draw their figures from the market-place? Do the masses form themselves in imitation of the figures in novels and plays? In my mind the answer to this question can be given without a moment's hesitation. The effect of polite literature upon life is incomparably greater than that of life upon polite literature. In particular the writer of fiction frequently cuts himself entirely off from matters of fact, and directs his attention exclusively to the arbitrary play of his imaginative faculty. And even when he derives his motives from real life, he does not confine himself to the average facts and truths which the conscientious observer would deduce from the ordinary course of everyday life, but picks out some exceptional case or other which chance may have offered to his view, or which may have made an impression upon him owing to personal, organic reasons, and even this too he does not reproduce with fidelity, but gives it such other shape as may suit his peculiar nature. This, therefore, is the sole extent to which life and fiction verge upon one another. It is no wider than the back of a knife. A particle of froth scattered about by a wayward gust of wind, and glittering in strange colours, takes the place in fiction of the broad and deep ocean of life. If therefore, generally speaking, we can

still talk of an influence of life upon fiction, it will not be greater than that of real life upon dreams, which are also in truth to some extent caused by very feeble impressions on the senses, but nevertheless elaborate these immeasurably and arbitrarily into the most unlikely conceptions. The effect of fiction upon life, on the other hand, is one of vast magnitude. It exerts a powerful and incessant suggestion, which overcomes the whole of the reader's individual manner of thought and action.

Just try to realize the conditions of existence of the average masses. An individual of that class passes his life under the most restricted conditions. He does not become on intimate terms with many persons outside of his family circle, and hardly ever gets the opportunity to cast a glance into the interior of another's mind. He has no knowledge derived from personal consideration of the great passions and feelings, the bewilderments and distractions of mankind, and if compelled to rely upon his own personal experiences, would hardly judge that there was yet another world outside of his kitchen or his shop, at all events over and above the church, the market-place, and the town hall. But he reads light literature; he goes to the theatre, and there sees figures with which in actual life he has never met—fairy princes and stately ladies with diamond stars in their hair, adventurers and criminals, human angels of light and crafty intriguers; he observes strange situations such as he has never found himself in, and learns on his own account how the imaginary forms of the writer think, feel, and act in those situations. According to all the laws of psychology, it is inevitable that the individual, who cannot by observations of his own limit or correct the writer's assertions, appearing to him as they do in the form of positive communications, must believe him without the least distrust, derive his conceptions of life from his works, take his persons as examples to be followed in his case, and make his judgments, preferences, and dislikes his own. Like every other form of suggestion, that exerted by novels and plays also influences the individual who is mentally less developed or less sound more than the distinguished, original, and perfectly normal individual; and therefore,

primarily, those beings who act according to set patterns, young persons, women, the hysterical, and those who are weak in their minds or nerves. I have for years been able to observe this myself in Paris. The female Parisian is altogether the work of the French journalists and novel-writers. These last literally make of her what they like, both, physically and mentally. She talks, she thinks, she feels, she acts, nay, she clothes herself, carries herself, walks and stands just as her favourite authors direct. She is a mere puppet in their hands, and involuntarily obeys all their dictates. A broken-down fellow with a repulsively corrupt taste depicts his ideal of a woman in some newspaper or some book, just as he may have worked it up in the rotten atmosphere of his degenerate phantasy—her gait is of a tripping character, her voice a falsetto one like that of a child, her eyes are opened wide, and while she is eating her little finger sticks out away from the others in the air. Straightway all his female readers make what haste they can to realize this ideal, with the result that one merely sees feminine apes, who jump about with tiny little steps, pipe in a high pitch of voice, draw their eye-brows right up to the middle of their foreheads, cause their little fingers to sprawl out from the rest of their hands in a spasmodic sort of way, and make themselves unspeakably repulsive to every healthy taste on account of their false childish affectation. At the same time this is under no circumstances conscious and intentional affectation, but automatic habit become natural. Some other satyr of the pen, whose blunted senses are tickled into a state of wakefulness by other conceptions than those of a feminine creature of the age of childhood, takes delight in a description of the little locks of hair which are found in curls on the necks of many women at the back; he speaks of them in those saucy caressing terms which are expressive of states of excitement on the part of the senses, and touches them up with far-fetched words which are as shameless as certain looks and touches. Without delay his female readers comb their hair upwards from the back of the head, arrange it into tufts and stiffly-turned corkscrews, and go about with a collar cut low down at the back, so as to give them a deceptive similarity to some

condor or carrion-kite, and all this, simply in order to present an appearance like that of the woman whom their novelist has depicted to them as a likely person to erotically excite a man (even though it should be a man soaked through and through with vice, though this indeed he does not add). Matters are just the same with us in Germany. That Clauren's female characters and the present-day Gold Elsies and Geierwallys have been made a pattern for imitation by whole generations of German maidens and women, every one knows who is not of those who in the presence of a woman lose their senses to such an extent that their judgment becomes paralyzed and their contemplation assumes the aspect of worship. Fortunately the creators of Gold Elsies and Geierwallys are not foul poisoners of the nation, and the characters which they hold up to their female readers as models are, even when untrue, false to nature, and devoid of taste, nevertheless at least morally free from objection. Man is less influenced than woman by the effect of this romantic and dramatic suggestion, and that more particularly because he reads less light literature than she does, but he too does not altogether escape it. When the *Sorrows of Young Werther* appeared, there very soon sprung up in Germany swarms of Werthers, who not only assumed the outward semblance of thinking and feeling like their prototype, but really acted up to it, and gave proof of their earnestness in many cases by committing suicide, to which extent mere theatrical behaviour would hardly have gone. In France that victim of love and fate, Antony, produced a whole race of Antonys, and Byron has to answer for the fact that in the thirties the entire civilized world teemed with demoniacal youths with pale cheeks, long hair, broad collars, spoiled brows, and awfully mysterious looks. Writers of novels and stories thus occupy a position in front of the mental watering-troughs like that of our Biblical Jacob, and to their hearts' content set their "rods of green poplar and of the hazel and chestnut tree," in which they have "pilled white strakes," in the gutters, so producing generations of "ring-straked, speckled, and spotted."[1]

[1] Genesis xxx. 37—39.

Now this would not be much of a misfortune if our *belles lettres* held up to the masses only healthy and true models. This, however, they do not do. Literary fiction includes practically nothing except impossibilities, improbabilities, and anomalies; the exceptions to the rule are so trifling that they can be left quite out of account. The cases which it depicts are exceptional cases, which have never or only extremely rarely occurred; the persons whom it sketches belong to an exceedingly small minority, when they can in any way be conceived of as existing in flesh and blood; the opinions, the feelings, the actions, which it represents, are morbidly exaggerated in one or another direction, and very different from those of the typical average persons who enjoy mental and moral equilibrium. Literary fiction is an immense collection of morbid stories, of which some at least have been conscientiously observed, though by far the most of them have been hatched by a hideous or ignorant phantasy, an endless inventory of all the troubles that can possibly visit humanity, from the slight dimness of the judgment due to some unreasonable passion up to the most monstrous moral degeneration.

Even the newspaper press has this character of publishing what is exceptional and morbid. The pieces of news which are retailed by it to its readers have reference to murders and assassinations, fires, railway accidents, floods, earthquakes, all events which scarcely one man in a hundred in civilized countries sees with his own eyes in the whole course of his life. This is, however, also quite natural. The normal life seems from our traditional point of view to contain nothing worth relating. That godfather Hinz slept well, enjoyed his coffee in the morning, served his customers in the forenoon, and ate his dinner with a good appetite, all as usual, does not offer any attraction as a piece of daily information. That only is sketched out which deviates from the normal, and that, of course, is what is exceptional, what is morbid. If, therefore, some wise Theban, to whom a newspaper would be an unknown institution, were to appear among us and take one of our papers in his hands, he would most assuredly ask—"My noble host, has the world and humanity become so wicked that nothing but crimes now take place? Are the

gods so angry with the inhabitants of the earth that they visit them with all these misfortunes? Do all the nations burn to make war one upon the other?" The stock exchange and market reports and advertisements alone would to some extent calm his disturbed spirit and show him that there was still, besides those horrors and states of excitement, a quietly peaceable and regular everyday life.

Novels and plays have in their higher forms, nevertheless, the same tendency as the newspaper press. They busy themselves solely with exceptional and morbid cases. The refuse of polite literature relates coarse external processes of an unusual character, such as adventures, unprecedented occurrences, and crimes, and the more pretentious literature depicts extraordinary persons and mental conditions of an unusual kind. The reader of inferior culture is supplied by the authors who work for him with blood and ghost stories of the penny dreadful type, and at best with voyages of discovery and wonderful adventures among brigands and pirates, or in wars and shipwrecks, while the reader of a higher state of culture is feasted with stories of passions and inward conflicts, such as are not just accustomed to be met with on the streets; but in all cases it is something different from the usual fate of men that composes the subject of a work of fiction. Of course there is again this difference, that while writers of fiction of repute withdraw themselves from the truth only in so far as they exaggerate it or confine their arbitrary conduct to what they assume in advance, the conclusions which they draw therefrom being correctly argued out, the mediocre and imitators, on the other hand, in their attempts to represent real life, don't limit themselves to merely drawing the outlines with more emphasis and laying on the colours more strongly, but are faulty in their designs and bungle in their painting The writer of fiction, however, is never justified in repeating to the majority of his readers, or to one who has been selected with a lot of trouble and sought out with the help of a Diogenes' lantern, that profound "Tat twam asi!" (This is you!) of the Indian sage. How many books are there which might apply the words of the ancient Roman to the healthy normally developed person—"'Tis of you that the story is

told"? Let us just investigate this matter a bit together. Every German, perhaps every person who has attained to a higher degree of culture, has in him something of Faust, the thirst after truth and knowledge, the troubled feeling of his finiteness; but how many of us experience that thirst with so much torment as to suffice to make us desire to appease it with the contents of the "clear, crystal cup"? Most girls will at a certain period of their lives feel like Juliet; but only a very few of them will carry the eccentricity of their love for Romeo so far as to go to the old hermit and lay themselves down in the tomb. Jealous men there are in plenty, and unfortunately many of them have more cause for feeling disturbed and suspicious than Othello had. But yet they do not smother their Desdemonas, not even when they belong to the dwindling minority of generals and governors. I, for my part, have only known of one man in real life who made the attempt to carry out Shakespeare's suggestion. The whole story, however, was sadly spoiled by this fact, that the Othello in question was only a menial servant in a wholesale coffee establishment, acquired his courage for the act by drinking gin, and pretended to remember nothing at all about the matter, which by the way was only half completed, when afterwards he was arrested for it. At the same time, the writings of fiction mentioned above by way of example are among the truest and most human specimens of the whole literature of the world. When we step down to the less fashionable grades of literature, the matter becomes far worse. The three jolly musketeers never could have lived, nor would men be able, particularly in our present-day world to carry on an existence like theirs of unbridled love, gambling, and brawling for the space of a week without having all the policemen of the neighbourhood at their heels. Even out of millions of readers there will not be one exposed to the possibility of becoming a Robinson Crusoe, and faithful Friday is of incomparably less importance to us all than Hecuba is to actors. Is there then no fiction at all which is perfectly true to nature, perfectly human in every way? My answer in good faith must be that I see none such. Even *Hermann and Dorothea*, that true-hearted, homely picture of

German citizen life in the smaller towns, fails to come up to the standard of reality in so far as it proceeds upon assumptions which only become truths after the lapse of centuries. Hardly ever do we see whole communities leaving their homes with their entire families and wandering about over the country, so that Hermann never gets the opportunity of finding his Dorothea at the well, as might have happened in patriarchal times, or of leading such a servant-girl to his father's house. All these beings, who bustle about in novels and on the stage, are people from the moon, monstrosities like those of the yearly market shows with a horn in the forehead, bearded women, wizards, giants and dwarfs, they drag out with their lives a curious fate, which is worth being exhibited to the onlookers for an entrance fee of ten cents, they have a valuable mystery sewed into their coat-linings, and they are deeper inwardly than outwardly by quite a number of metres. As for that ordinary, quiet humanity, which is neither specially good nor specially bad, which supports itself honestly and dies having made its will, if it happens to have anything to leave, and whose cheerful life over the breadth of the earth is illumined by the sun,—that humanity is not the one that is found reflected in works of fiction.

I trust that no one will upbraid me on the score of that "naturalism" which a few modern French writers give out as their own spick-and-span invention. I am perfectly well aware that it is its boast that it only depicts the naked truth of life and works in accordance with "human documents," that is to say, in accordance with the observed facts. But that is indeed a base fraud, and the veriest trap for the unwary. The authors who speculate in naturalism, do exactly the same thing that I have seen done by an enterprising photographer in a little town in Hesse. This man had in his possession a large collection of old cartes-de-visite which he had on some occasion bought up for a trifling sum at a sale by auction in Frankfort. Now, every time that any person of note came to be thrust by the course of events into the foreground in the way of popular interest, he would select from his confused heap some portrait which corresponded with his conception of the new hero of the day, and expose it for sale as the counter-

part of the person in question. Thus in 1878 he sold a Disraeli with a cucumber nose of a strongly alcoholic appearance, and four years afterwards a Gambetta with a venerable prophet's beard and some kind of fur cap on his head. His system of business was not exposed until he chanced to exhibit under the name of Garfield the photograph of a man who was a stranger so far as he was concerned, but in whom the entire district recognized their deceased tax collector. The authors of the naturalist type have inherited from their predecessors of the last three thousand years antique methods; but simply because now-a-days the tendency of the period happens to be of a serious, scientific, and cogitational character, and because the public professes and perhaps actually even believes that it only takes an interest now in observed facts and scientific experiments, they give to their methods such fashionable names as naturalism, experimental fiction, human document, etc. One of Zola's novels is exactly like one of Sue's novels, or like one of Prevost's or Scarron's—a freely invented story which has been realized solely in the phantasy of the author and nowhere else. If one writer preferably scribbles amid mud and another selects cleaner places of residence, if the one zealously depicts drunkards, street-walkers, and idiots, and the other rich, distinguished, and praiseworthy model citizens, this is simply due to personal peculiarities and does not imply any change in respect of methods. Naturalism, therefore, no more denotes truth to Nature or real life than idealism or conventionalism does, for all statistics instruct us that even in the most corrupt metropolis there is only to be found one Nana to every hundred inhabitants, and one *assommoir* to every fifty private residences, that instances like those of Nana and the *assommoir* are for the vast majority of persons unknown and exceptional quantities, and therefore of no importance, and that Nana and the *assommoir*, even when they do exist as a matter of fact, even when, a thing which cannot however be conceded, they are depicted without exaggeration and arbitrary adaptation, can at most have the value of a numbered curiosity in some pathological museum, but never that of a universally applicable "human document."

Why is it, however, that literary fiction, the naturalist type just as much as the other, is solely occupied with exceptional and morbid phenomena? One reason, as will appear from what has been already indicated, is to be found in the reader. The public has no desire to find repeated in books what it knows apart from them. It wants sensations, but these are only afforded by the transition from an existing condition of the consciousness to a new one, the cessation of one impression and the beginning of another and different one. The circumstances amid which we commonly live are so thoroughly believed in by our senses and our consciousness, that we actually no longer notice them, just as we do not notice any trace of the pressure of the atmosphere under which we are constantly placed. In order to excite its interest, the writer has, therefore, to unfold to the public other previously unknown circumstances and persons, and these he can naturally only find outside of what is ordinary, outside of the majority and its normal type. A second reason is to be found, not in the reader but in the writer of fiction. Now-a-days, and indeed for a hundred years back, the writer of novels and plays is found to be either the son or at all events the life-long inhabitant of a metropolis and influenced by its mental and moral atmosphere. He lives among excitable and in many cases morbidly degenerate persons. It ought, too, not to be forgotten that the inhabitant of a metropolis represents a type of humanity that is destined for destruction. Every family of such inhabitants dies out in the third or at the latest in the fourth generation, unless reinforcements from the country renew its blood and impart to it fresh vital power. Nervous troubles in particular form a frequent characteristic among this multitude. Innumerable individuals among them are settled upon that border-land between a healthy intellect and insanity, which in these latter times has so powerfully attracted physicians for the insane and psychologists. They are not as yet really deranged, but they are no longer perfectly normal. Their brain centres do not work as they ought to do. One is debilitated and degenerate, another excessively irritable and unnaturally developed. They feel, think, and act differently from sound and vigorous persons.

Slight motives arouse tempests in them; their sensations become passions, over which their judgment has no power; they are emotional and impulsive, show exaggerated states of love and hatred, their opinions are full of extravagances and their acts of commission and omission inconsistent. These are the persons whom writers in a metropolis see constantly before them, whom they observe, and to the number of whom they themselves generally belong. It is evident that the life in common of natures of this kind must give rise to problems which could never originate among normal persons. Their relations of attraction and repulsion, their internal and external conflicts, their complications and catastrophes are quite different from those among healthy people, in whose life sunshine and the ripplings of a meadow brooklet, the shades of a mountain forest and the free winds of the plain, in short the whole disposition and movement of Nature, play the part of a constantly working regulator. The metropolitan writer of fiction amid his surroundings of super-sensitive or blunted nervous or hysterical, sentimental or corrupted abnormal persons, who are half men of genius and half idiots, and waver their whole life through more or less between the physician for the insane with his hands stretched out towards them and the criminal judge, loses the power of comprehending human truth, and in the end actually does not know any longer how the world is reflected in a clear undimmed eye and in a brain that is neither super-excited nor degenerate. Thus it is that these novels of Zola, that are the result of hereditary mental disease, come to be written, thus it is that the *Ghosts* of Ibsen comes to be written, and thus also all those crack-brained stories of love, jealousy, and adultery, which are every bit as foreign and incomprehensible to a vigorous and sound organism as the megrims and stomachic spasms of chlorotic invalids.

And the image of such fiendish passions, eccentricities, and disturbances of the equilibrium in respect of intellect and morality, is held up to the reader, works upon him by way of suggestion, and serves him as an *orbis pictus* by means of which he is enabled to learn all about the world and men, and as a model in imitation of which he may form himself! What

falls to be done on the other side? The writers of light literature in previous centuries, who did not yet dwell in big cities or suffer from nervous diseases, offered their public the stimulations which it required in the form of gross jests, of adventures of travel, hunting, and war, or of avowed tales such as only a poor fool like our worthy Don Quixote could take in earnest. For reading material of that kind our contemporaries have become much too saucy, and Red Indians, negroes from the Congo, and enchanted princesses now fascinate only children of less than twelve years of age. I see no other cure for this utter pollution of the reader's phantasy with belle-lettristic decomposed matter unless it be to determine by acts of parliament that all writers of novels and plays shall be forbidden residence in big cities and be banished to peaceful villages, to dwell among hardy country people, or to convince our professional writers that in place of rare exceptional cases they ought to bring before the people wholesale facts established by statistics, and in place of mental pathology mental physiology, and that in place of writing a book about diseased persons they ought to write a book about healthy ones.

I fear, however, I very much fear, that such a useful and commendable book would utterly fail to find either a publisher or a reader.

IX

THE NATURAL HISTORY OF LOVE

WHAT exactly has the suggestion exerted by literary fiction made of the sentiment which is of the greatest importance for the maintenance of the race, the sentiment, namely, of love? No other fundamental impulse in human beings has been over-refined, forced from its proper direction and unhealthily developed, to the same extent that it has been, nor has any other psychical phenomenon been falsified and systematically obscured to the same degree.

This has gone so far that it requires a good deal of consideration before making up one's mind, with cool seriousness and scientific impartiality, to approach the investigation of the subject of love, its mode of origination, its purpose, its course, and the states of consciousness associated with it. All the giddy emotional creatures of both sexes, whose weak heads have been turned by light literature, their only mental nourishment, raise a cry of murder and demand that the irreverent analyzer should be stoned. The indignation against him knows no bounds. He is a heartless cynic, an intellectual cripple, to whom Nature has denied the sublimest sensations. He is a criminal who sins against the majesty of woman, and a profligate who forces himself sacrilegiously into the holy of holies of love. This has been said of Schopenhauer and his disciple and successor, E. von Hartmann, and this is what would be said by the whole crowd of violet-eaters of Darwin, Herbert Spencer, and Bain, if they were to read and understand these thinkers. Love is not fitted to be the subject of impartial treatment, but only of ecstatic dithyrambs. One

may not approach it as a calm observer, but only as a lover. By your leave, that is a request which cannot be conceded. I am permitted to speak about hunger without being hungry, and of fear without being the subject of fear. I am allowed to analyze and to describe these phenomena in cold blood, without any one being on that account justified in assuming that I am incapable of valuing the joys of a well-spread table, or of experiencing the states of excitement which are awakened in a man by the recognition of a danger that is serious and beyond all proportion superior to his means of protection. Wherefore should love not also be open to sober observation without at once giving occasion to the assertion that the observer is incapable of experiencing the sensation of love, and consequently too of comprehending it? The worst conditions imaginable for the investigation of hunger or of fear would be these sensations themselves. It is not to be expected of a hungry man that he will be able to determine in a methodical manner the effect of the conception of a roast of beef on his nervous system, especially when it happens to be giving out its fragrance on a plate before his eyes, and one who is under the influence of fear acts like a prudent man when he only thinks of running away and not of self-contemplation. In the same way one who is in love is the very last person to whom one need look in the hope that he will throw light upon the mental processes taking place during love. This can only be accomplished by the disinterested spectator. He, too, has no reason to fall down on his knees, to turn up his eyes and get into a dizzy or frenzied state of lyrical superabundance whenever he speaks of love. It is just because it is the most powerful and for mankind the most important sensation that one requires a head all the clearer to consider it, and that every care has to be taken to guard against excitement and enthusiasm and the language of signs and flowers, since, when these prevail, the real facts can neither be seen nor depicted.

And yet what we are concerned with in the case of love consists also of nothing else than perfectly natural things, even though those who are in love refuse to have it so. The human brain contains a supreme centre of generation, upon

which various inferior centres in the spinal cord are dependent, and which on its side is influenced by stimulative conditions on the part of the latter. At that period of life when the reproductive system of the individual is in full maturity and the seat of lively nutritive processes, the centre of generation in the brain is also found to be in a condition of tension and sensibility which makes it very susceptible to all kinds of excitement. In emotional natures, as well as in those whose mind is unemployed, it exerts on the whole consciousness a predominant and frequently even supreme influence. It produces effects upon the judgment, the phantasy, the will, excites conceptions that are borrowed from the domain of sex, and gives to all the work of the brain one sole tendency, I might almost say, a sexual polarity. This condition is subjectively experienced by the individual as an impulse to love or a craving for love. It is sufficient for the individual who is in this frame of mind to meet with a similarly-minded individual of the opposite sex, in order that the impulse and the craving may find an object and run the full course of love. The whole activity of the brain that has been aroused by the centre of generation has in that case the being loved as material to work upon, the latter not being perceived and judged of as he or she actually is, but as he or she, as the case may be, corresponds to the organic requirements of the being who loves. The being loved is merely a puppet which the other party clothes and drapes according to his taste.

Every healthy human individual has an instinctive, unconscious sensation of the qualities which have to be possessed by the individual of the opposite sex in order that by their mutual union his own qualities may be transmitted to and intensified in the offspring. The more highly cultivated, the more original, the more differentiated he himself is, so much the more complex also are the qualities with which he endows the wished-for and expected individual of the other sex. Should he have many individuals from whom to choose, he will select for himself with unerring certainty that one which most closely approximates the organic ideal which he had elaborated in himself at the moment of sexual maturity. Should he have no choice, he simply contents himself with

any individual who is not so completely different and remote from his ideal as not to be able to excite his centre of generation in the least, or as to seem to it to be something as foreign and indifferent to it as, say, an individual of his own sex, an animal or an inanimate object.

The nearer that one individual approaches the organic ideal of another, so much the more speedily, as is natural, does the work of identifying him with that ideal proceed; if the two happen to perfectly coincide, then the well-known thunderbolt will strike home, it will be a case of love on the spot, at first sight, and he has a sensation as if he had always known and loved this object of his affection; should there be, however, various differences, then the individual will first have to go through the labour of adapting, adjusting, and accommodating himself to the other, to overlook the dissimilarities between the latter individual and his ideal, and to bring the two together in his mind as closely as possible; in which last case the process of falling in love will be only a gradual one, more rapid or more tardy, according as the object of the affection is more rapidly or more tardily adaptable to the already existing organic ideal. In any case what is loved is really not another human being, but an ideal which has been elaborated by the lover's own organism; the impulse to love is the search after an incorporation of this inward ideal, love the instinctive conviction that this incorporation has been found, and the being loved the projection of the inward ideal into the external world. An individual's amatory life, therefore, also begins with his sexual maturity and endures as long as that state of maturity endures; the ideal is then organically elaborated and continues in a state of animation during the whole period of sexual maturity. Whether it is actually realized or not need not be considered; it is in existence and is waiting for the opportunity to incorporate itself. Virtually or potentially a person is in love, even though he may not be actually in love; he loves his ideal when he is not in love with any definite human being. The lower and simpler that the ideal is, so much the easier is it for the individual to find it in corporate form. Common and homely natures, therefore, are able to fall in love without much diffi-

culty, nor do they find it hard to replace one object of their affection by another, while refined and complex natures experience a great deal of trouble in meeting in life with their ideal, or anything sufficiently approximating it, or in putting a successor in its stead should it chance to be lost.

The process of courtship has the effect of a strong stimulation of the centre of generation, and the individual who is the object of such a process may, under the influence of the state of excitement of his centre of generation, easily forfeit the certainty of his instinctive sensation of what is organically necessary in him for the continuation and intensification of his qualities in the offspring, and so fall into an error, which, however, does not survive the process of courtship, which is the disturbing cause. The realization that a mistake has been made then leaves behind it a feeling of shame and humiliation, which in turn becomes metamorphosed into hatred of the individual who induced it, and is one of the worst of the disagreeable sensations to which a person is subject.

Healthy and natural love is always clearly conscious of its purpose. It is the longing for the possession, the demand for that bodily union which is able to bring about the origination of posterity. In strong individuals love sets free impulses that are sufficiently powerful to triumph over every opposing will and to overcome every obstacle. In individuals with weak wills it does not have this capacity; the emotion continues to be subjective and does not become converted into actions. The strength of the love of any being ought, therefore, not to be measured by the exertions which it puts forth in order to acquire the being loved, for the magnitude of these exertions depends upon the strength of his will and not upon that of his love. It must nevertheless be added, by way of limitation, that in the healthy and normal person all the brain centres are developed in pretty much the same proportion, so that individuals who have weak wills will also hardly possess very energetic centres of generation, whereas those individuals who are able to love violently will also as a rule possess powerful wills.

The difference in the importance of the two sexes, so far

as the maintenance of the race is concerned, also causes corresponding differences in their amatory lives. The part which the woman plays is by far the more important; she has to supply the whole material for the formation of a new being, to elaborate it completely in her own organism, and above all to impart to it her own qualities just as she has inherited them from her forefathers. Man, again, only supplies the stimulation to this tedious and difficult, nay, heroic work, upon the quality of which stimulation the quality of the work in question is to some degree dependent, just as in truth also, to cite an example, the same dynamite burns harmlessly or flares up brilliantly, or explodes with terrible force, according as it is respectively set on fire by a live coal or a lighted lucifer match or an explosive. In the case of the woman the centre of generation is therefore more strongly developed and its activity a more lively one, as well as more important, having regard to the action of the brain as a whole. Woman, too, possesses a more distinctly developed ideal of the man who is organically necessary for her and will fill up her life, nor does she allow herself to be so readily induced to renounce this ideal and content herself with a substitute of a totally dissimilar character; should a woman have once found her ideal, it will be practically an impossibility to get her to renounce it, and the emotion, in the form of which she experiences the lively excited state of her centre of generation, drives from her consciousness every other kind of contents, so that she is henceforth able to do nothing else except love, places her will, her judgment, and her phantasy at the disposal of her affection, and utterly refuses to allow any attempt on the part of her judgment to struggle against the emotion by the help of intelligent conceptions. A woman has an instinctive sensation that she ought not to make any mistake, that any error would have alike for herself and her posterity results that could not be made good, that it would under all circumstances draw along with it the lavish expenditure of a comparatively large amount of organic labour, and she is, therefore, extremely distrustful and careful to avoid the possibility of such an error; on the other hand, she realizes as certainly that she has not made a mistake when she has

found the right man, and in such a case she will be far more ready to give up her own life than that man. In the case of the man the matter is quite different. He may quite easily make a mistake, because a mistake so far as he is concerned has no organic results at all, and can be made good, so to speak, the very next minute, that is, so far as his share in the preservation of the race is affected. For the same reason also his ideal of the woman who will organically complete him is much less plainly typified; for the same reason he is apt to fall in love much more quickly and easily with the first nice woman he meets; for the same reason also he is much less constant; for the same reason also he can love much more frequently, relinquish much more easily, and forget with much less trouble; for the same reason the activity of his centre of generation does not occupy so important a position in the activity of his brain as a whole; and for the same reason his love can with comparative ease be controlled, suppressed, and even completely vanquished by his judgment.

Such is my rough and hasty sketch of the natural history of love, as it may be observed in perfectly healthy and normal individuals of both sexes. But is this simple, true, effective love ever to be found, speaking generally, among those circles who derive their mental nourishment from light literature? I very seriously doubt it. What is there regarded as love and given out as love are imitations of those unhealthy and untrue conditions, the representation of which is the sole work of novels and plays.

States of disturbance and disease of the centre of generation are of very frequent occurrence among highly civilized persons. A race that is in process of declining will be first of all visited in this source of future generations. Debility, exhaustion, degeneration alike of the individual and of the nation and race, will find expression very early in functional anomalies of the centre of generation, so that love becomes unnatural in its nature, its strength, and the choice of its object. Moreover, every disturbance of the nervous system has a corresponding echo in the centre of generation, which even in normal persons makes an effort to rule over the entire activity of the organism and to make it serviceable for its own

purposes, yet is restrained in its aggression by the opposition of the other centres, while it is allowed full and free play in a brain that is enfeebled or thrown out of its proper equilibrium, fills the consciousness simply and solely with its own excitations, makes the whole organism its slave and plants its flag of triumph upon the ruins of the understanding and judgment, which flag is at one time a petticoat, at another a fool's cap, but often also a processional banner or the scourge of thorns of the self-flagellated. Literary fiction, especially that of our time, is thoroughly imbued with these unhealthy forms of love. The cause of this phenomenon has been specified in our last chapter. The writers either themselves possess super-sensitive nerves or live amid the usual surroundings of a metropolis, where they do not see before them any other examples than those of a disturbed organic equilibrium. Now, even though there was not a single character in fiction who suffered from pronounced amatory madness, yet they one and all belong to the class who inhabit that border-land which lies between perfect soundness and mental disease, and of which we have spoken in our last chapter. The physician for the insane recognizes in the representation of the mental conditions and actions of those who are in love, as it is to be found in our light literature, the signs of various forms of mental disturbance which are well known to him. In general, the more serious symptoms are only slightly indicated; should they, however, have been strengthened to some little degree, then they will furnish classical examples of erotic mania, of ecstatic delirium, religious madness, and other diseases of the brain besides, mention of which in the presence of an unprofessional public would not be proper. A reader who is capable in respect of his judgment, and particularly one who has been professionally educated, cannot help imagining himself in a hospital when looking about him in the domain of literary fiction. Nothing but patients and invalids! Here is an individual who at the sight of a woman loses his senses, gets out of his wits and does the most silly things; there is another who is transported into a dangerous ecstatic state of more or less boisterous character by a glove or a flower belonging to a person loved; here again love

promotes impulses to criminal acts, there to sadness and dejection ; at one time we are shown a suspicious alternation of capricious coldness and sudden tenderness, at another a bankruptcy of a character and mind to the extent of the most lamentable loss of will-power under the influence of the passion. And all these freaks and extravagances, these states of exaltation and renunciation, these ravings and cravings, these states of feeble desire and crazy violence, are, without a word of warning, without any remark to the effect that the subjects under consideration are exceptional diseased cases, laid down as the regular and natural outward forms of love!

Reading material of this sort exerts a profound and extremely injurious impression even on ordinary readers, and now too on those who are afflicted with nervousness and perhaps also a little disturbed out of their mental equilibrium, and particularly on the women of big cities. Ladies have a natural tendency to regard love as the single aim and substance of the life of human beings, and they are completely confirmed in this view, which, so far as they are concerned, may be quite proper, but nevertheless has no application to men, when they see that the books from which they derive all their knowledge of the world and of life, from the first line in them till the last, turn upon nothing else except love. The description of the struggle over a woman and of the enthusiasm felt at gaining her intensifies her natural partiality for herself to the degree of ambitious mania and self-deification, and she actually imagines that the possession of her is a piece of super-terrestrial good fortune, the acquisition of which cannot by any means be paid for by the man even with the renunciation of all the other tasks and aims of his existence. She learns to value a man solely on account of his capacity for love ; the miserable weakling, whose imbecile brain has not the power to oppose any resistance to his emotions of love, and who labours without the help of mast or helm in the current of passion, she regards as touching and charming ; the healthy and strong man, whose power of cogitation keeps his emotion in check, who even keeps his reason when under the excitement of love and merely follows the dictates of the latter so far as they are approved by his judgment, she

eschews as cold and heartless. Melting softness as of butter and an exaggerated state of whining felicity she calls devotion, while vigorous strength which is practised in self-control and which in its proud estimation of its own value thinks quite as highly of the affection offered as of that received seems to her, as it were, repulsive roughness. That diseased state of degeneration which looks upon a man as a ball for the woman to play with, or as the victim of his own states of excitement, seems to her to be the mark of true manliness, and her power of imagination even gives to the hero of love by way of outward appearance, pale cheeks, languishing looks, and a dream-like forehead, features which do not belong to the attributes of manly health and vigour. According to her conception of love, if it is to be deep-rooted and genuine, it must assume the form of exaggerated buffoonery; she expects of it mental and physical acrobatic feats, senseless effusions in prose and verse, sighs, tears, and wringing of the hands, unintelligible mysticism in language, fancies which would never occur to any rational human being, and deeds after the style of those of Orlando Furioso or of Amadis de Gaul. In order to be recognized as real, love has to put on airs and make gestures; a quiet, suppressed feeling, which neither prattles nor gesticulates, does not appreciably affect one's sleep or appetite, and is compatible with the fulfilment of the duties of one's calling, is not reckoned as love. The latter is only understood when it comes like a storm; it must make its appearance with the accompaniment of thunder and lightning; the lover must dart to his beloved as Zeus did to Semele; should he appear under any other circumstances, he is not the expected god.

This is not all. Our light literature also disturbs the natural course of development of the feeling of love in the youthful male reader, and very especially so in the female reader. The ordinary rule is for the centre of generation to begin to come into a state of activity and excite in the consciousness emotions and conceptions of an erotic nature when the organism has become matured. In the youth of the cultured classes, however, the reverse of this holds good. Erotic emotions and conceptions are artificially produced by

the reading matter in the consciousness, and excite the centre of generation to a premature and therefore injurious state of activity. Should the impulse to love be the result of the sexual maturity of the individual, then the organism will also have had the time and power to elaborate instinctively the ideal of the partner whom it feels to be necessary as it were for its completion as a whole, the feeling becomes certain and reliable, the influence of caprice limited, and the risk of any error in the choice decided upon essentially lessened. If, on the other hand, erotic conceptions are prematurely suggested to the consciousness by what is read, then the organism will be taken by them unawares before it has yet been able to form its ideal of a partner; the foreign suggestion disturbs this delicate task; the organism is no longer able to hear its own indistinct voices, but only those of the writers of the fiction; the phantasy does not receive the conception of the individual longed for from the mysterious depths of the cells and tissue, but from the leaves of novels; the individual does not attain to sure sensation of the requisite partner, and any haphazard meeting may be fatal through the want of that inward examination which alone can expound it. The female novel-reader or theatre-goer does not know whether the man who approaches her is the right one, for she is possessed not of any organic ideal, but only of recollections of the heroes in her novels and plays. She confounds her whims with the true needs of her organism, and perpetrates cheerfully those prejudicial mistakes which make a woman's life wretched for ever.

In ninety-nine out of a hundred cases among the cultured classes, especially those inhabiting big cities, what is actually regarded as love, or what is given out to be love, is not a love that has originated in the organism, but an effect of the suggestion given by poetical composition.[1] Should lovers

[1] The influence of the suggestion exercised by poetical composition in the origination of an amatory relationship has perhaps never been expressed in so surprisingly plain and definite a manner as in Dante's famous verses :—

> "Noi leggiavamo un giorno per diletto
> Di Lancilotto come amor lo strinse.
> . . . .

belonging to this category never have read a novel or seen a sentimental drama, they would not probably really be in that condition of mind in which they imagine themselves to be, or should they actually have been in love, their feelings would in any case be manifested in thoughts, words, and actions quite different from those they do employ. They love not with their centres of generation but with their memories. Consciously or unconsciously they play a drawing-room or boudoir comedy, and repeat with all seriousness and zeal the scenes, of whose description in books and of whose representation on the stage their phantasy has gained possession. It is the custom in Paris for loving couples in the honeymoon of their young affection to make pilgrimages to the tomb of Heloise and Abelard, that famous but unfortunate pair of lovers of the Middle Ages. There is a deep meaning in this game. For it is extremely probable that the loving couples owe their relationship, which they experience as agreeable, to the dead minstrels of delight of the twelfth century, or, in other words, to the love-stories which have been chanted in their presence by poets with the accompaniment of the sounds of the harp. The man who is loved by a well-read woman would do wrong to be in the least degree conceited thereat. What she really loves is not his individuality, nor yet her organic ideal, which he to some extent approaches; but the romantic character, which some writer or other has invented, and for which she wants a representative. Let us beat our breasts, my brethren! However humiliating this may even appear to our self-consciousness, we must nevertheless honourably avow that in our love experiences we have all been to a greater or less extent the weaver Bottom with the ass's head in the *Midsummer Night's Dream*, with whom Titania was in love because she was suffering from the effects of the magic flower. The Oberon, who has squeezed the juice of the magic flower

---

Quando leggiemmo il disiato riso
Esser baciato da cotanto amante,
Questi, che mai da me non sia diviso
La bocca mi bacio tutto tremante. . ."
Inferno, Canto v.

upon the eyes of our Titanias, is none other than the writer of fiction. Chance in our case, as it happens lucky chance, it was which brought it about that we just came across our Titanias when they were in this state. But whether it be Bottom or Quince, Titania certainly does not love either the one or the other, but only a romantic character suggested to her by waggish Oberon, just as Faust "with his magic potion in his body" thinks he sees an ideal Helen in every woman.

The Parisian woman has been reputed by several generations of writers of all nations, working as it were from one and the same model, to possess an indefinable sort of charm, or skill, known as "chic." The result of this is that every numskull feels the water collecting in his mouth, and winks with his eyes, whenever the expression Parisian woman is used, or whenever he actually sees one before him in the flesh. If you ask such idiots what they really see in her, they will content themselves with simply bellowing out like a calf the one word, again and again—"Chic! chic!" They see in the Parisian woman what their books have led them to believe that they would see in her. So also with regard to actresses and circus-riders, literature has puffed them up—I cannot use any other word—in a similar way, and this is why these individuals are pre-eminently the objects of the enthusiasm of all our ensigns, youths from the high-schools, and æsthetic counter-jumpers. On the woman's side, too, literature has, at all events in Germany, in the same way suggested officers of the army as the only real and worthiest object of their love, and the cloth of two colours might well be hung up as a sort of consecrated wreath in the temple of the muse of fiction whenever it triumphs over a female heart.

One ought to investigate, whenever the opportunity of doing so occurs, the love affairs that may be seen in one's own social surroundings springing up, growing, and ending in happy marriages, or in obtrusively ostentatious catastrophes. As a rule, pretty much the following regular train of events will be found to occur:—A man, prompted by his proximity to her at table, or by the duties imposed on him at a dance, pays a little more attention than usual, and is of course polite, to some young lady. The latter feels at

first merely a sense of satisfaction at the in general very much over-valued effect produced by her person, and her flattered vanity puts her into an amiable and friendly state of the temperament, which again is misinterpreted by the self-love of the man. Now the work of chance comes to an end and the suggestion of the writer of fiction begins to act. He and she have each felt a slight inclination for one another, the phantasy elaborates it, the memory conjures up all the images of loving couples known to fame, all the lyric poems, love-letters and avowals, which may have been read, begin to make a disturbance and rush to the pen and to the lips, the feelings become more and more intensified, more and more zeal is displayed in the erotic parts which have been begun to be played, and finally the altar appears before them, and here, unperceived and imperceptible, a crowd of writers extend blissful hands over the heads of the couple whom they and none else have thus brought together. Subsequently it turns out only too frequently that Thecla has entrusted the part of her Max to an utterly incompetent actor, or *vice versâ*, in which case still another piece is performed, which likewise has been suggested by some writer of fiction, and that either a drama founded on some case of adultery, or a romance relating to some case of renunciation and going to a convent. But in nearly every instance we have to deal with a phonographic sort of love, in which the little man and little woman repeat word for word, with metallic Punch and Judy voices, what the writer of fiction has previously spoken into them, quite after the style of the ingenious instrument invented by the American Edison.

Ye hypercritics of love, quintessencers of passion, and pathologists of the human heart, ye nice contrivers of ambiguous situations, extraordinary persons with double-barrelled souls and unheard-of incidents, what have you made with your stories of murder and piracy of this homeliest, truest, and most delightful instinct of mankind, what sins have you committed against us all!

X

EVOLUTIONARY ÆSTHETICS

HERBERT SPENCER says in his *Principles of Biology* (I quote from the English edition, vol. ii. p. 253, note):—"This seems as fit a place as any for noting the fact, that the greater part of what we call beauty in the organic world, is in some way dependent on the sexual relation. It is not only so with the colours and odours of flowers. It is so, too, with the brilliant plumage of birds, and with the songs of birds, both of which, in Mr. Darwin's view, are due to sexual selection; and it is probable that the colours of the more conspicuous insects are in part similarly determined. The remarkable circumstance is, that these characteristics, which have originated by furthering the production of the best offspring, while they are naturally those which render the organisms possessing them attractive to one another, directly or indirectly, should also be those which are so generally attractive to us—those without which the fields and woods would lose half their charm. It is interesting, too, to observe how the conception of human beauty is in a considerable degree thus originated. And the trite observation, that the element of beauty which grows out of the sexual relation is so predominant in æsthetic products—in music, in the drama, in fiction, in poetry—gains a new meaning when we see how deep down in organic nature this connection extends."

In these few lines, which I have left in their somewhat awkward form, are contained all three, or rather all nine of the Sibylline books of a natural science of beauty.

The human mind, even that of the masses, will gradually

acquire the custom of thinking in accordance with the principles of evolution, that is to say, of recognizing in every phenomenon an episode of development, which in itself is incomprehensible, yet becomes intelligible in virtue of what has preceded it, and, when viewed in connection with the past, produces far less mysterious effects than when it is considered in its own light alone. So soon as human thought has attained to this point of view, few things will produce such comical effects upon it as the opinions and attempts at explanation, which even now-a-days constitute the substance of æsthetics as it is formally taught.

Hitherto, of course, the science of mind has to a large extent not observed the principles of evolution. It used to regard the phenomena of mental life just as they are at the present day represented to us, and tried to comprehend them without ever asking how they came to originate, from what simple beginnings they became elaborated into their present complex state, what portions of them were stunted survivals or dead remains, and what other portions were impulses of vital moment.

Even Kant, when speaking of the categories, fails to come up to his usually shrewd and clear style of thinking, and attaches to them the mystical remark that they are forms of human thought which indicate what is extra human and superhuman. Translated into less mysterious language, this simply means that the forms of human thought, such as time, space, and causality, do not depend upon the experience, that is to say, the perception by the senses, of the individual being, and must therefore have come into his consciousness by some other path than that of the senses, in fact must have been born with it. And this statement was made by him, though Hume had already long before his time discovered the explanation of at least one of these categories, that of causality, when he laid it down that it arose simply in this way—that the human mind saw one phenomenon always succeeding another, and so gradually assumed the habit of imagining this sequence to be incapable of interruption, and of suspecting the existence of dynamical relations between the phenomena. The conception of space has since been

proved—particularly by Bain, Spencer, and Mill—to be a result of the perceptions, conveyed by the muscular sense to the consciousness, of the individual's own movements, and quite recently etymology has been in a fair way of deducing from the meanings of the roots of the words, which now-a-days express conceptions of time, evidence which seems to show that by time man originally understood merely the day, the endurance of sunshine, and not in the least anything of an absolute, *à priori* character that exists beyond the solar system, beyond a mere alternation of day-periods and annual seasons, and beyond a nature which exhibits a constant succession of changes.

Exactly the same thing has happened in the case of morals. Its existence was one day discovered, it was recognized that human beings have the notion of good and evil, of virtue and vice, and instead of the question being put, whether this notion could not have become developed in a natural way, people at once jumped to the conclusion that it must have been revealed to mankind by some Divine being in the complete form then observed. At the present day, of course, we know that there are no such things as either good or evil, and that it is the necessity of living in common that has by degrees induced human beings to term those actions which would be detrimental to the interests of the community as bad and vicious, and those again which would be advantageous and serviceable to those interests as good and virtuous.

Nor has æsthetics escaped this law of hasty conclusions, so universally prevalent among humanity, which, strange as it may seem, professes to be profoundness of thought. Since the feeling of beauty, as it is experienced by man at the present day, does not admit of being directly explained by any practical result, or any process perceptible to the senses, hundreds of philosophers, from Plato down to Fichte, Hegel, Vischer, and Carrière, have had ready at hand the dogmatic assertion that this feeling is but another of those mysterious phenomena which seem to point to a superhuman element in man, one of the forms in which the finite human mind can to some extent get a definite conception of infinity, a

sublime presentiment of that being of whom the senses have no experience, and from whom all material phenomena primarily originate, and all the rest of the like perfectly meaningless aggregations of words.

According to the popular saying, one ought to avoid showing a fool an unfinished house. In this instance, however, popular language gives utterance to a real heresy. Exactly the reverse is the case: one ought to avoid showing a fool a finished house. For, so soon as the house is set up all ready, the fool stands gazing at it, with his eyes and mouth opened wide, and is unable to comprehend how it has become so high and broad and beautiful. Should it, on the other hand, be shown to him in an unfinished state, should he be allowed to inspect it as stone is laid upon stone and beam upon beam, then it will be a simple matter for him to understand the origin and existence of the blue marvel, its erection and its purpose, the wherefore of its parts and the how of its form. A familiar anecdote tells how King George III. of England once became wrapt in thought over some plum dumplings which had been served up to him at a farmhouse on the occasion of a fox-hunt, and how after profound meditation he burst out with the exclamation—"How the devil did those plums get inside the dumplings?" Metaphysics occupies a position in front of the phenomena of mental life like that of George III. in front of the plum dumplings. As it does not appear to it conceivable that a plum could have got, in a natural way, inside a dumpling, shut up as it is on every side, it boldly hazards the assumption of an ultra and supernatural way. Accordingly, our conceptions of time and space and causality must be of the nature of postulates of human thought, inborn, "*à priori* institutions"; so too must morality be a divine revelation, and so must our feeling of beauty be a perception of what is transcendental and infinite. At this point however, the philosophy of evolution steps in and shows, with the homely sagacity of a cook, that the plum dumpling, in the form in which it comes all steaming on the table, is certainly incomprehensible and inexplainable, but that it has not always been in respect of its roundness without end and its entirety without opening the symbol of eternity,

and that it had been once, in the form of pliant dough, wrapped round the plums in a perfectly natural and perfectly comprehensible manner; whereupon the mystery at once ceases to be a mystery.

Like our system of morality, like our conceptions of time, space, and causality, so also ought our notion of beauty not to be considered in its present-day condition of perfection, if it is to be understood, but investigations must be made with a view to finding out how it has come to be what it now is. As things are, it is a thing of a very complex nature, but originally it was a very simple matter. Now-a-days we apply the term beautiful to quite a series of phenomena that have the most diverse characters and appeal to the most diverse senses—music and paintings; a landscape and a waterfall; a cathedral and a storm at sea; a poem and a jewelled ornament. In the same way, we designate by the term æsthetic quite a series of sensations which are throughout dissimilar to one another—the delightful sense of awe at the sight of thundering spring-tide breakers, and likewise the happy state of satisfaction experienced over the consideration of Oberländer's pictures in the *Fliegende Blätter;* the admiration of the Venus of Milo, and likewise the approbation of a stately building. Metaphysical æsthetics has toiled hard to trace back this multiplicity to some unity. It was, however, a course of torture, which could have no result. In order to make the various phenomena similar to one another, they have to be stripped of their essential peculiarities, by adding on to the one something that was possessed by the other, and taking away from the second something that the first lacked. And when even this trick of adulteration or equilibration failed to go far enough, an arbitrary addition was lent to all phenomena, and in this way a sophistical similarity was produced which was founded, not upon natural features but upon artificial vestments in which the phenomena were clothed. Our wish is to attempt the same thing, but in a more honourable way; in place of twirling the constituent parts of the complex phenomenon still more zealously about among each other, and by an infusion of metaphysical infinity sauce making them still more unrecognizable and apparently

alike, we shall, on the contrary, carefully separate them from one another and give again to each of them its original physiognomy.

There is one peculiarity, which is certainly common to all æsthetic sensations, namely, this, that they are the reverse of disagreeable sensations. The agreeable sensations, however, which the various kinds of beauties arouse in us, start from different organic sources. Before we commence digging for these, just one word about the pleasurable and disagreeable sensations themselves. Pleasurable sensations are such as are aroused by impressions or conceptions from impressions, which are of advantage in any kind of way to the preservation of the individual or of the race, while disagreeable sensations are the contrary of these. That this is the case rests upon a natural and spontaneous basis. A being in whom impressions which threatened or injured his existence failed to arouse any disagreeable sensations, would have had no reason for avoiding such impressions, and would have been compelled to succumb to them at once, so that he would not have been able to leave behind any posterity, and consequently cannot be any longer represented in our present-day organic world. Conversely, a being who experienced injurious or threatening impressions as disagreeable, would have felt an impulse sufficiently powerful to make him avoid them or ward them off, and consequently to protect himself from injuries and guarantee to himself a regular course of development, which would also include the bringing into the world of posterity. Until now we have confined our considerations to the avoidance of injurious matters. This, however, is not enough. In order to thrive specially well, the organism has to seek out conditions which would be not merely not injurious to it, not merely indifferent, but directly advantageous. It has to experience favourable and beneficial impressions as agreeable, thereby to be induced to desire them and make efforts after them. The stronger that its pleasurable sensations may have been in the case of useful impressions, so much the more actively will it strive to attain them, and so much the more favourable can the effect be which they may exert upon its growth and its development. Wherefore our

present-day organisms represent the select of those ancestors, in whom impressions menacing to their existence aroused the strongest disagreeable sensations, and impressions advantageous to it the strongest pleasurable sensations. Just one single example to illustrate this fact. In themselves all odours are equivalent in character, and there are among them neither agreeable nor disagreeable ones. The odour of decay and the odour of roses are in themselves no more different than, say, blue and green light or the notes of trumpets and flutes. If there was something or other over and above the sense of smell, for instance, some material substance, upon which odours will make an impression just as light does on chloride or bromide of silver, so that a piece of apparatus might be devised which would behave with respect to odours in the same way as photographic plates do with respect to light, then even the most unphilosophical mind might with the greatest ease be made to comprehend that the odour of putrefaction is in itself an odour just like any other, and only makes a disagreeable impression on the human nose in consequence of its prevailing constitution. It so happens, however, that the odour of putrefaction is a feature of fluid and gaseous forms of matter which originate in virtue of the organic action of tiny living creatures that are very dangerous to the higher animals, while the odour of roses is peculiar to a flower, which makes its appearance in dry, sunny places and blooms during the fine season of the year. A being to whom both odours were indifferent, or who actually had a preference for the odour of putrefaction, would not shun the localities where processes of decay were taking place; he would breathe poisonous gases, perhaps eat putrid matter that was impregnated with the poison of the animal alkaloids (the so-called ptomaines), come in contact with micro-organisms which would produce in him dangerous and quite easily also deadly diseases, and would sooner or later have to fall a victim to consumption and death. A being, on the other hand, in whom the odour of putrefaction produced disagreeable sensations and that of roses pleasurable ones, would avoid all those noxious forms which make their appearance in the train of the former, and would prefer to look in spring

and summer for warm and sunny places in the open air which would manifestly be very beneficial to his health. He would thrive and bring vigorous descendants into the world, who on account of their greater strength and fertility would not fail soon to dislodge the descendants of the being who experienced the odour of putrefaction either as not disagreeable or actually as pleasurable, so that now-a-days only those human beings would survive who, when their nervous system is in a sound state, experienced disagreeable sensations with respect to the odour of putrefaction, and on the other hand pleasurable sensations with respect to that of roses. It is only in morbid degenerate individuals that the contrary state of matters is observed, and their preference for smells which are experienced and shunned by the healthy majority as stinks leads frequently to a deterioration of their condition. This effect of the two odours becomes, too, still more intensified by the associations of ideas which they arouse. With the odour of putrefaction we associate, for instance, the conception of phenomena which are connected with the death and annihilation of the organism, and with that of roses the conception of the season of the year at which nourishment begins to become more abundant for a man under natural conditions, warmth returns and his life in general becomes easier and more agreeable.

This rule, that all pleasurable and disagreeable sensations are originally due to the utility or hurtfulness of the phenomena producing them for the individual or the race, admits of no exceptions. The facts which are alleged to contradict it are imperfectly observed or superficially interpreted. Let me just give you one example of this. Intoxicating alcoholic liquors produce in the drinker decidedly pleasurable sensations, and yet are for his health and his life in the highest degree injurious. That is the fact. But why do alcoholic drinks produce such effects? In the first place because, previously to paralyzing and stupefying the organism, they excite the nervous system to a higher degree of activity, produce an intensive feeling of strength, cheerfulness, impulses on the part of the will and a plentiful supply of conceptions on the part of the judgment, that is, a condition which can in the natural order of things only be produced by such circumstances as

are in the highest degree beneficial for the health and life of the individual, for instance, a superior form of nourishment, an adequate amount of rest, a perfect state of health, residence in localities well supplied with oxygen, the society of favourite friends, youth, freedom from all causes for anxiety and care, and so on. Primitive man experienced this elevated state of the temperament which precedes actual intoxication only in conjunction with these very favourable circumstances, and had, therefore, in accordance with the law above stated, to apprehend it as a pleasurable sensation. It was not until long afterwards, when the delight felt in that state of the temperament had already become in him an organic instinct, that he succeeded in making wine and brandy and got the opportunity of producing the same exceedingly pleasurable intensification of the activity of the brain and nerves by a different though injurious means. That only happened, however, a few thousand years ago, and that comparatively short space of time would not suffice for the reconstruction of an instinct in the organizing of which mankind must have occupied hundreds of thousands of years. If alcohol were capable of being found in Nature in a pure and easily accessible state, like water or the fruits of trees, so that man and his predecessors might have been accustomed to spirituous liquors from the very beginning of their lives, and might at the very outset have associated that elevated state of the temperament with them, then all beings who experienced this state of the temperament as pleasurable, and on that account made efforts to provide themselves with it through a copious indulgence in spirituous liquors, would have become drunkards and would have also experienced in their own persons all the evils of the state of alcoholism and have very soon died out; in which case only those human beings would now-a-days exist to whom spirituous liquors smelt and tasted as repulsively as, say, petroleum or the fluids of putrefaction, and who apprehended the elevated state of the temperament, which is produced by alcohol, as a disagreeable sensation.

Now the pleasurable sensations, which the beautiful, using the term in its widest sense, excites in us, have an origin not in the least different from that of all the rest of our pleasur-

able sensations. They are a result of this fact, that what we now-a-days experience as beautiful was originally either beneficial or advantageous both to the individual and to the race, or that living beings first became familiar with it solely in conjunction with beneficial or advantageous phenomena, and so came to organically associate it with the recollection of these.

The phenomena which are experienced as beautiful may be divided naturally into two great classes. They are connected either with the existence of the individual being or with that of the race. In the first class are included the sublime, the charming, and the appropriate, and in the second class the essentially beautiful in the narrower sense of the term, and the pretty. These five forms of what is æsthetic are frequently confounded, and yet on account of their differences they ought to be carefully distinguished from one another. We shall examine each of them in order and try to understand the relations which they bear to the instinct of self-preservation in the individual and the race.

The sublime is the sensation of an immense disproportionateness between the individual apprehending and the phenomenon apprehended, and of the crushing superiority of the latter over the former. Everything that is excessively great and powerful produces the effect of sublimity. The conception lying at the root of the sensation of the sublime is this—" Measured by comparison with this phenomenon I am nothing. In opposition to this phenomenon my energies are insignificant. To struggle against it, to overcome it, is utterly impossible. Were I compelled to fight against it, I should be utterly brought to nought." This sensation is one that is very closely related indeed to that of fright, and these two are really to be distinguished from one another only in this way, that the sensation of the sublime comprises, besides the conception of one's own utter powerlessness, also this other conception, that fortunately there is no necessity for any struggle with the huge phenomenon, and that this crushing superiority of it will not really be employed in overcoming and bringing to nought the being apprehending it. The spectacle of Rome burning, as viewed from the terrace of the Emperor's palace, is able to arouse the sensation of the sublime, because the

grand phenomenon under such conditions does not imply any danger to the contemplator. Should the latter, on the other hand, be placed in the centre of the conflagration, then the self-same phenomenon would arouse in him not the sensation of the sublime but that of mortal terror. Ocean breakers are, when seen from the beach, sublime; in the shipwrecked individual, however, who has to pass through them before he can reach dry land, they arouse mortal terror. The physical phenomena which accompany the sensation of the sublime are of the same nature as those that are associated with the sensation of fright. There is the same anguish, the same stoppage of the heart's action, the same interruption of the breath, all evidences of the state of excitement of the so-called vagus; there is the same tremor travelling down the spinal cord, the same state of immovability, which may be termed a momentary paralysis. States of numbness and of being turned as it were into stone make their appearance in sensitive natures at the sight of what is sublime, just as much as at the sight of something terrible that is really menacing to them. The sublime consequently has the most intimate connection with the instinct of self-preservation in the individual, that is, with his habit of feeling himself as it were in a state of antagonism to the external world, of regarding the latter as a possible enemy, and of forming estimates of the prospects of victory or of defeat in the event of his coming into conflict with it.

The charming is the sensation that is aroused by those phenomena which in any given space of time produce a great number of impressions on the senses and cause a lively state of activity of the centres of perception, understanding and judgment. A bare wall exercises a tiring effect, because it gives rise to only one single visual impression, and does not render a more intense state of activity on the part of the brain necessary in order to find out its signification. A richly ornamented wall, on the other hand, produces a charming effect, because, after a single glance at it, it will excite numerous visual impressions and a high degree of activity on the part of the brain in finding out its signification. What is uniform may, when it is found spread out over a vast extent

of space, give rise to sublime effects, but never to those of a charming character, which multiplicity alone can do. This last only ceases to be felt as charming when it is no longer perspicuous and comprehensible, when it cannot be grasped at a single glance or explained by the understanding without difficulty, but imposes upon the brain centres an excessive amount of work in investigating, dividing, and analyzing. For which reason what is confusing and overdone is no longer charming. As is self-evident, what is manifold will also not be charming in those cases in which its several constituent parts are not in themselves felt to be agreeable. Accordingly, a wall daubed over with a large number of dirty spots of the most various sizes and forms will not produce a charming effect in spite of the compound character of its aspect. The sensation of the charming, therefore, is connected with this feature, that the individual feels the consciousness of his own life to be agreeable. This consciousness, however, consists in the apprehending of impressions, and whatever gives many simultaneous impressions, which nevertheless are perceptible without much trouble, also gives to the consciousness a greater degree of intensity and to the individual a richer sensation of his life.

The appropriate is really experienced not as beautiful but as satisfying, but since this last is also a pleasurable sensation it is readily confounded with what is beautiful. The appropriate is what is intelligible, that which is in harmony with the human conceptions of the laws regulating a phenomenon. A stone pyramid set upon its apex would be felt to be absolutely the reverse of beautiful, because it looks inappropriate, because its arrangement runs counter to our conception of the law of gravity and the law of equilibrium deduced therefrom. We would have the feeling that it could not endure for any length of time in that position, that it is bound to fall. To cite an example, this is the sort of effect that is excited by the leaning tower of Pisa. On natural persons this tower produces an impression the reverse of beautiful, it arouses feelings of distrust and anxiety, that is, disagreeable sensations. A house, the massive stone upper storeys of which rest upon a ground story constructed of quite thin iron columns, produces an

effect the reverse of beautiful, because its arrangement looks inappropriate. If human beings had been accustomed for many successive centuries to the sight of buildings in which iron and stone are applied in this way, then the sensation would be found universally prevalent, that a limited mass of iron is possessed of a great supporting power, such as much larger masses of stone or wood would not be able to overcome, the sight of extensive masses of stonework resting upon slim iron supports would no longer give rise to the conception of absurdity and inappropriateness, and houses with iron ground floors and stone upper storeys would no longer be felt to be other than beautiful, just as now-a-days the sight of a tree with wide-spreading branches, in spite of the fact that it is at variance with our fundamental idea of a firmly and securely planted object, namely, that of a figure resting upon a wide basis and lessening in extent as it approaches the top, is not felt to be the reverse of beautiful, because it is known that the trunk, in spite of the smallness of its size as compared with the phenomenon as a whole, is solid, and that the spreading branches, in spite of their great extent, are light. The æsthetic effect of what is appropriate is connected with that instinct in man which prompts him to comprehend phenomena and find out those laws relating to them that are not perceptible to the senses. He experiences what is unknown and unintelligible as something hostile and mysterious, as something menacing, for which he is not a match, while what is self-evident and rational interests him in a familiar and friendly way. For which reason it is that the appropriate, which is merely another designation for what is known and intelligible, is in the habit of arousing agreeable sensations and the inappropriate disagreeable sensations.

We have thus seen that the sublime, the charming, and the appropriate are all connected with the fundamental conceptions entertained by man of his adverse and consequently hostile relations to the external world, that is to say, to the non-ego, and that they all induce an excited state of his instinct of self-preservation. We will now see that the beautiful in the narrower sense of the term and the pretty are both connected with the instinct of racial preservation possessed by man.

Beautiful is every impression felt to be which, in any way whatsoever, excites the chief centre of generation in the brain, whether it does so directly, or whether it does so by means of associations of ideas. The primary type of all that is beautiful in the eyes of the man is woman at the age of sexual maturity and capable of propagating the species, that is, at the height of youth and health. In presence of such a one his centre of generation experiences the most powerful states of excitement; the phenomenon and the conception of her arouse accordingly in him the strongest pleasurable sensations which it is possible for a mere look or thought in general to give. The organically become habit of associating the phenomenon of a woman with the notion of beauty and with the pleasurable sensations excited by it prompts the human mind to give the form of a woman also to every abstract conception which is experienced as agreeable or beautiful. Thus the notions of fatherland, of fame, of friendship, of sympathy, of wisdom, etc., are all represented to the senses in a female form. So far as the woman's world of conception is concerned all this will not have any appreciable effect. The sight or the conception of a person of her own sex cannot in any way excite the centre of generation of the woman; her ideal of beauty müst therefore be the man. That, nevertheless, woman entertains pretty much the same notions of beauty as man does, is due to this fact, that man, being the stronger organism, is able to transfer his own ideas to woman by the aid of suggestion and to overcome her discordant ideas. Moreover, the notion of beauty in the case of both sexes is as a matter of fact only "approximately" and not completely identical, and had the woman possessed the requisite capacity and ability for close self-observation and for analyzing and describing the conditions of her consciousness, she would long ago have established the fact that her system of æsthetics is essentially different in many respects from that of the man.

The pretty is a phenomenon which is either directly or by association of ideas connected with the conception of childhood, and which arouses that impulse to love children upon which the preservation of the race so immediately depends. As pretty, consequently, we regard everything that is small,

elegant, and helpless as youth, but particularly the reduced copy of well-known objects which in reality are wont to appear very much greater. Reductions of this kind give rise to the conception that they bear the same proportion to the actual originals that children do to grown-up persons. Of this manner of thought there are among peoples in a state of nature and among languages of an inferior stage of development clear traces to be found. The Indians actually believe a wheelbarrow to be the son of a freight-wagon, and the pistol is in the Magyar language called the "son of a gun" (kölyök-puska). The physical phenomena and counter effects which the pretty originates bear the greatest resemblance to those aroused by the sight of a child. Women like "to kiss" what is pretty, and as a matter of fact have the frequently irresistible impulse to cherish it in the characteristically mother-like way, that is to say, by stroking it, taking it in their arms, and carrying it to their lips.

Many phenomena, in consequence of the extent and multiplicity of the associations of ideas aroused by them, appeal at one and the same time to the instincts of self-preservation and of the preservation of the race, and to various subordinate forms of these instincts, and are felt to be beautiful in different ways. Spring-time in the open country, for instance, is at one and the same time beautiful, charming, and appropriate. It excites the centre of generation because it was for primitive men and their organically inferior ancestors the season for propagation of the species, its favourable nature for this being due to the fact that it brought to living creatures a more abundant supply of nourishment and endowed them with a more vigorous vital activity. It is, too, charming, because it includes a great, though at the same time not confusing, profusion of individual phenomena that are agreeable in themselves, and therefore yields in a given space of time the largest number of impressions on the senses; and lastly, it is appropriate because it arouses the conception of favourable conditions for the individual life.

I have already spoken of the difference between the respective systems of æsthetics of the two sexes. It has been organically brought about by the general relationship and division of labour prevailing between the human sexes as at

present constituted. The male element in the race represents the idea of individualism, original development, and therefore also in a certain sense selfishness, which only looks after itself, or looks after others merely when its own necessities render it unavoidable ; it has to combat against Nature as well as against its fellow-members of the same species, and in its struggles for nourishment and love has continually to ward off dangers, to overcome opposition, and to plan methods of attack. In its case, consequently, the instinct of self-preservation is specially well-developed, for it alone teaches it how to avoid dangers and overcome enemies. On it also, for the same reason, those phenomena which are connected with the instinct of self-preservation produce stronger effects than they do in the case of the female element ; so, too, the male element has more sense and feeling of the sublime, the charming, and the appropriate than the female element. The latter, on the other hand, is the supporter of the inherited qualities of the race ; the preservation of the race, too, chiefly depends upon it. It does not have to enter into conflicts, is consequently less exposed to dangers, and does not require any special development of the instinct of self-preservation ; on the other hand, the instinct for the preservation of the race is more strongly developed in it, and it experiences the impressions which affect the conceptions relating to sex and maternity in a more powerful degree than the male element does. It has consequently more sense for the beautiful, as more narrowly understood, and in particular for the pretty, which appeals far more than does the beautiful to a specifically feminine instinct, that, namely, of the love of children.

Originally, the sensation of the beautiful is produced solely by natural phenomena ; art is able to produce this sensation only in so far as it succeeds, by its available means, in arousing the conception of such natural phenomena as are felt to be beautiful. Its available means consist of direct imitation, symbolization, and the winding up of the mechanism of the associations of ideas by conceptions or impressions on the senses. Thus language is able to produce the sensation of the sublime, when it excites the conception of something mighty, something immeasurably superior to man, for instance, when it describes an almighty divine being, or again when it

shows the prevalence of immense energies in the phenomena of nature, battles, human destinies, and so on. Architecture will give the sensation of the sublime when it establishes places and palatial edifices on so large a scale that the spectator appears to himself as compared with them to be as small and feeble as he does when compared with a forest or a primeval mountain. The conception of the appropriate is afforded by an art-product when it permits its purpose and its law of origin to be recognized from its form, a thing which only happens when it recalls to our minds familiar natural phenomena, the purposes of which have been made known to us by experience and the law of the origin of which we have guessed, that is, of course, with the exception of the prime cause. The forms of organic animals and plants, the shapes of crystals and the grouping of larger conglomerations of matter under the influence of the laws of mechanics, are the natural phenomena known to and understood by us, which art-products must resemble that they may be comprehended by us as appropriate and experienced as beautiful. Each single art has not the power of affording all the æsthetic impressions, but can only give those that are associated with the phenomena which they have the capacity to imitate or to recollect. Architecture, for instance, is not able to give the impression of the beautiful in the narrower sense of the term, that is to say, excite the centre of generation; it might be done by the application of ornamental sculpture, but this would no longer be architecture. Music again is not able to give the impression of the pretty, because it can neither imitate the essential features of the phenomenon of childhood nor recall them by association of ideas. And so with other cases.

These are the fundamental characteristics of natural, evolutionary æsthetics, which, as will be observed, does not need to call any transcendental element to its aid in order to explain the sensation of the beautiful. And now if some patient systematizer wants to spin out these main thoughts into a three-volume book of reference, I trust he will meet with all success.

XI

SYMMETRY

LET us start at the very outset by establishing this proposition, that there is not in Nature a single example of perfect symmetry, that is, of a form which is distinguished in this way—that the same formation is found exactly repeated on the two sides of an imaginary middle line. Even those natural phenomena to which man can apply a law of commensuration with the slightest amount of constraint, such as crystals, flowers, leaves arranged in two rows, and animals that develop to the right and left of a longitudinal axis, are not really symmetrical, and cannot as a matter of fact be divided into two or more portions which would exactly coincide with one another. Everything that we are able to apprehend by our senses is irregular. It varies in a way never before observed, more or less, from the plan that the human mind might attach to it, and it is always rebelling with a greater or less degree of impetuosity against the law under which we gladly believe it to come. None of the heavenly bodies is mathematically round, none of the paths of the stars conforms exactly to the scientific formula given to it by us. No human visage too looks on the right side exactly as it does on the left, and no bird has both its wings entirely alike. And this universal asymmetry prevails, not only in those phenomena which we are able to apprehend with the naked eye, but also in the most secret and inmost arrangement of matter, in particular in its organic associations. The fact that a ray of light on passing through solutions of organic matter is refracted at the most different angles, and that even by a

body which, judging from its chemical constitution, is to all appearance identical, at one time more to the right and at another more to the left, has been cited by Pasteur as evidence that the atoms are arranged in the molecules on an asymmetrical plan, and the same *savant* holds the reason of this disposition to be this, that even the natural forces which cause the grouping of the atoms and molecules, such as heat, light, electricity, attraction, etc., are asymmetrical. He develops this conception even farther, and actually goes on to assert that life is in its ultimate form asymmetry, and that we shall yet have it in our power to brew life in retorts from the simple elements, when we shall have come to know how to make use of asymmetrical forces.

I must admit that to me this manner of thinking seems to pertain more to mysticism than to chemistry, mechanics, and biology. I do not quite know what I ought to conceive by an asymmetrical force or effect of force. Nevertheless, whatever may be the reason of it, this fact is established, namely, that Nature knows no symmetry. This last idea is an invention of the human mind, to which no original example could have brought it. Humanity has created it entirely of its own hand. Art has an instinctive consciousness of this circumstance, and in its highest efforts tries to follow the apparently wayward asymmetry of Nature. Whenever it is symmetrical it ceases to produce charming effects. Nature produces the stream, the serpent-like course of which shows changing lines at every step ; art constructs the canal which is the realization of a geometrical formula, and which from one end to the other does not present any unprecedented deviation from the law of its formation that is recognizable after a few steps. Out in the forest every stride brings some new surprise, and at any time only a slight turn needs to be carried out in order to receive fresh suggestions. The French garden is like a carpet, every square yard of which presents the same pattern, and which if sufficiently unrolled must seem a poor affair, even though the first yard has been well made. Human taste finds edification in what is asymmetrical, and receives from symmetry a disagreeable sensation. If it is not stunted and warped, it prefers even in human work the

asymmetrical approximations to Nature to the symmetrical creations. We consider the road that winds in capricious curves over mountains and through valleys as incomparably more beautiful than a railroad that is drawn rigidly in a line; the English park with its artificial wildness as far more pleasing than the plantations of Lenôtre; a piece of Morris tapestry with its carelessly arranged capreolate flower and leaf work as more stimulating than wall-paper of the French rococo style; and the Gothic cathedral, in whose rose-windows and gargoyles the creative phantasy of the architect runs riot, on which not one pinnacle is exactly like the other, and of which not one piece of the main work is exactly like the other, infinitely more charming than the Greek temple, of which one column looks exactly like the other, which is in front just as it is at the back, and to the right just as to the left, and which might be turned like a good piece of cloth without its appearance undergoing any change. We admire a portrait which faithfully reproduces all the irregularities of shape in an individual's features, and smile compassionately at even the best drawn fashion plate with its expressionless, because painfully symmetrical, ideal heads. The fact that Japanese art has attained such great results in Europe arises from the asymmetrical character of that art. A servile imitatrix of Nature, she copies the latter in its apparent arbitrariness. She despises that golden mean which has been invented by man, but which has more speculation about it than sense of beauty, and never tyrannizes over a human figure with any canon that is not originally its own.

Since symmetry, however, is neither a natural form of development nor is experienced by us as beautiful, the question arises of itself how the human mind came to be able to hit upon it and to which of its needs it corresponds.

The answer is afforded by the fundamental peculiarities of mental action in the case of man.

In the first place we have the habit of causal thought. We imagine that there exists behind the phenomena that are perceptible to the senses some immaterial element which is perfectly inaccessible to immediate observation, which in our arbitrary way we call cause, sufficient reason, or law, and to

which various philosophers have applied other names; for instance, Schopenhauer terms it will, Frohschammer phantasy, and so on. Nobody has as yet succeeded in physically apprehending a cause as such. At all times the only thing that has been observed has been a series of phenomena which succeeded one another without any real connection. Their association by means of some immaterial tie of cause and effect is due exclusively to our habits of thought. We see the lightning and we hear the thunder. We also notice that as a rule they follow one upon the other. But that any chain, as it were, projects from the lightning and draws the thunder after it, that we do not either see or hear, that is not taught to us by any of our senses that convey the phenomena of the lightning and of the thunder themselves to our consciousness, and that is added on to these phenomena by our brain entirely of its own accord.

By virtue of this habit of causality, we have actually got so far as to impute to the immaterial, imperceptible elements of the phenomenon, and therefore to its hypothetical or imagined cause, a greater degree of importance than we impute to the phenomenon itself. This is only natural. The scheme under which we bring the phenomenon is a production of our brain, and may be immediately apprehended by our consciousness without the intervention of the senses, while the phenomenon itself occurs outside of our consciousness and is imparted to the consciousness solely through the senses; what is self-created, what as it were originates under the eyes of the thinking Ego, what is apprehended without the intervention of the senses, must, however, appear to this Ego more real, more essential, and more vivid than the phenomenon which takes place outside the Ego and is never quite perfectly apprehended. Should, therefore, the phenomenon, as it is apprehended by our senses and communicated to our consciousness, not entirely coincide with its scheme or law, as our brain may have planned it, then we calmly sacrifice the phenomenon to the law, we falsify the former that we may save the latter, we believe more in the internal work of the brain than in our senses, and force our perception to adapt itself to our fabrication. For instance, we see a crystal, say,

the simplest form of crystal, that is, a cube. Three sides of this are regular, the three others are not so. Now we have planned out in our brain a special scheme for this phenomenon which necessitates six equally sized square surfaces, twelve edges all of the same length, and eight rectangular corners, each of which has three surfaces. The crystal which we see does not correspond with this scheme planned out by us. Accordingly, we do not hesitate for a moment to put down the phenomenon as wrong and our composition as right, and say—"This crystal ought to have been a cube. Its material, however, has lagged behind the idea. It rests with us, then, to come to the assistance of the material and to give it that form which it wished to assume but was unable to acquire." And thus we calmly and self-contentedly see a cube in a structure that is a phenomenon in itself and quite different from a cube.

We find ourselves here in the most secret laboratory of human thought, and I beg the reader to have just a little patience that we may together look about us rather more critically in it. One condition to the work of the consciousness is attention. By this has to be conceived the more lively state of activity on the part of certain definite nerve fibres and cells in the brain, due to a more plentiful supply of blood, while the rest of the fibres and cells receive less blood, are more feebly nourished, and therefore are either perfectly at rest or only work in a sluggish sort of way. A stronger impression on the senses has a greater stimulating effect upon the brain fibres and cells set apart for its reception, and awakens them, so to speak, out of their state of rest, while a feebler impression allows them to remain more or less in their state of idleness. The stronger impression on the senses consequently arouses our attention and gets into our consciousness, while the feebler does not do this. We have already seen, in our chapter on Genius and Talent, that we consciously apprehend only those elements of phenomena which stimulate our senses in the strongest way, and therefore arouse our attention. The example which I there cited by way of illustration was that of an oil painting. In this manifestly very complex phenomenon it is the optical element which

stimulates our sense of vision to a very strong degree and arouses our attention, and which is therefore consciously apprehended; the remaining elements, such as the smell of the oil, are feebler; they do not sufficiently excite the senses concerned, such as the sense of smell; the corresponding centres of perception are not stimulated sufficiently powerfully to arouse them to attention, and consequently the consciousness does not learn anything about those other elements of the phenomenon "oil painting," so that, when it elaborates the conception of an oil painting, it merely reproduces for itself the visual impression, while it overlooks the perceptions of those other senses which were not excited by the image to a state of attention. The same thing that has been observed by us in the case of the perception and conception of an oil painting is found repeated in the case of the perception and conception of all other phenomena. In each of these some one element preponderates, while the others make their appearance in a feebler form, and therefore excite the attention to a less degree. We make accordingly—always with the same arbitrariness with which we subordinate the phenomena to some immaterial cause—this preponderating element of the phenomenon its essential element, and overlook in our perception and conception of it all the other elements. In the cubical crystal that is naturally defective in its shape, for instance, that of rock-salt, the element of cubical formation preponderates. A few surfaces, edges, and corners, more or less regular, excite our attention, and we retain for the deviations from the cubical form, for the perverted surfaces, the misplaced edges and the missing corners, no farther attention. The result of this is that, in the phenomenon of the irregular crystal of rock-salt, we only apprehend and conceive of its preponderating element, that of its cubical formation, and that although manifestly even its more feebly appearing elements, its irregularities, have a value and significance of their own, and are quite as essential for the individual crystal of rock-salt, which we are at present engaged in considering, as those parts of the crystal which are formed in harmony with our hypothetical cubical plan.

Our brain is in fact an imperfect piece of furniture. It is

so constructed as to prevent the possibility of all its fibres and cells being sufficiently played around by blood at the same time and being sufficiently nourished and excited to attain to that degree of activity which comes into our consciousness as attention. Only one portion of the brain is at any time fully occupied, the other portions being more or less at rest. There ensues in consequence of this state of imperfection this necessary result, namely, that we can never be equally attentive to all the elements of any phenomenon, never perceive them all to the same degree, but can only notice those which appear in the strongest way, which most stimulate our senses and summon the nourishing blood to the brain fibres and cells which are connected with the senses stimulated—so arousing these to a state of attention. The one element which most stimulates our senses appears to us to comprise the whole phenomenon within itself, and we apply the scheme which we have made subordinate to that one element to the phenomenon as a whole. In this way it becomes explained why we have the tendency to schematize phenomena and trace them back to some simple hypothetical cause. What then is meant by a scheme? It is the formal law which we attach to one arbitrarily selected element of a phenomenon, and within the borders of which we also try to insert all the rest of its elements, even though as a matter of fact these should contradict it. This tendency to schematize is a defect in our process of thought, the explanation of which is to be found in the state of imperfection of our brain to which we have alluded. For should we already be in the habit of thinking causally, should we already be in the habit of ascribing a hypothetical immaterial cause to every phenomenon that is perceptible to the senses, then we would also, logically speaking, have to ascribe this hypothetical feature, that is, a cause, not only to individual arbitrarily selected phenomena, but to all phenomena whatever. As a matter of fact, no one phenomenon is in every respect like another; the individual variations must have their causes just as much as the similarities, that is, if we assume that these similarities are the result of a cause, of a law, and we have to impute to a phenomenon not one single plan, one scheme, but a hundred plans, a

hundred schemes, a separate scheme, namely, for each element which should be peculiar to it alone and to none other. Let us keep to our example of the crystal of rock-salt. Should we try to see a cube in the irregular form which we have in front of us, we would have to confine our considerations to the regularly arranged parts and say to ourselves—"The cause of the shape of these parts is this, that the whole was intended to be a cube. The scheme of this form is consequently the cube." We are not in the least justified, however, in overlooking the deviations from the scheme; we have also to assume a cause for these. The cause which allows individual surfaces and edges to be irregular is manifestly of a different order to that which formed the other surfaces and edges in a cubical way. As a matter of fact, consequently, the form which we have in front of us was not intended to be a regular cube but something different, new, varying from the cubical shape, indeed just this individual phenomenon at which we are looking and none other. The cubical scheme, consequently, is not applicable here, and it is a mistake for us to fancy that we recognize a cube in the form in question. And yet we are guilty of this mistake, because we are incapable of devoting at one and the same time the like degree of attention to the irregularities which are less surprising to us, that we devote to the regular parts, and therefore do not feel ourselves nearly so much impelled to devise for the former a schematic cause as we do for the latter. Hence all classification, all schematizing is a mistake, all approximation of different phenomena to one another a piece of arbitrariness, all simplification of multiplicity an acknowledgment of our incapacity to comprehend. Nature produces only individuals; these we artificially combine into races because we lack the faculty of critically observing every characteristic feature which is peculiar to any one individual and not to any other, of forming a correct estimate of it and of tracing it back to an individual cause. If there are such things as causes, then every phenomenon will possess not one but a hundred, nay, a thousand different causes, which combine together in this way only once and never a second time; then every phenomenon will be one resulting from countless influences, which are all of equal importance, since

the phenomenon has to be something different from what it is, if but a single one of these influences is lacking or should happen to be differently exercised. On the other hand, should there not be such things as causes, then every phenomenon will be an independent accident and incapable of being compared with any other phenomenon, and would have to be judged on its own merits and be regarded as strictly individual. This is a dilemma of which we cannot get rid, and the logical outcome of which is that in all cases the scheme is a defect in our process of thought and prevents us from seeing and judging of phenomena as they actually are; for should causes exist, then the assumption of a schematic plan, and consequently of a single definite cause, prevents us from regarding all the other causes, the product of which is the individual phenomenon, and should no causes exist, then the hypothetical schematic plan is in general only a dream, which has not the slightest feature in common with the phenomenon itself. This, however, does not admit of being changed, and if we do not care to assume that our brain will attain to a much higher degree of organic perfection, and some day be capable of working throughout its entire extent with an equal amount of attention, then there will be nothing else left for us to do than to submit to the inevitable, and for all time to come to apprehend in phenomena one feature more plainly than the others, to confuse this one feature with the phenomenon as a whole, to sacrifice the other features to it, to elevate it to the rank of a scheme, and to look upon the phenomenon as the realization of this scheme.

It still remains for us to deal with a last peculiarity of human mental work. In what kind of way does the mind start operations when it fabricates that hypothetical ideal plan, the realization of which it considers the phenomenon to be? It avails itself in this process of a very simple method—it reproduces that feature which, being the most striking, excited its attention and impressed itself upon its memory and consciousness. It consequently constructs for itself the cubical scheme for the crystal of rock-salt by reproducing the forms that seem to it striking, and therefore also the equally sized surfaces and edges, until they make up a

solid figure. In this way the mind completes imperfect bent lines so that they become regular complete circles, and defective crystalline flower and leaf forms so that they become schematic figures, and so on. The phantasy behaves with reference to the impressions on the senses like a kaleidoscope ; it reproduces the phenomena, that in themselves are irregular, in such a way that they yield a regular figure ; or regularity is in truth nothing else than a repeated occurrence of the same phenomenon. The process in the brain is consequently as follows—a phenomenon is apprehended by the aid of the senses and impressed upon the memory ; some striking feature, or it may be one which, while not in itself specially prominent, repeatedly occurs, is most plainly apprehended and retained, the latter in the same way as in the case of Galton's family photographs[1] those features which are found among the different faces seem to be more prominent than those which are individual peculiarities of the several faces and have appeared only once on the sensitive plate. Should the judgment then wish to bring the phenomenon into the consciousness, to remember it, the memory furnishes it with it in the shape in which it has retained it; that is to say, it imparts to the consciousness only the prominent feature or that one which, owing to its repeated occurrence, has been better impressed. Accordingly, in order to have the power of converting these separate features into a complete phenomenon, definite on every side, the phantasy perfects them by multiplying the features yielded by the memory, and thus produces a kaleidoscopic and therefore regular figure, which the judgment, owing to its tendency

[1] Galton's family photographs are, as is well known, produced in this way, namely, by taking photographs of the different members of the same family, all of which are of one size, and exposing them for equal lengths of time one after the other to the same sensitive plate. Those features that are identical in several or all the individual photographs exert a repeated, and therefore longer-enduring, influence on the sensitive plate than do the features that are found less frequently, or only once, and therefore leave a stronger impression on the composite photograph. In this way an average picture is produced which shows the features peculiar to all or most of the members of the family in the clearest way, and, on the other hand, those that only occur among a few of the members, or it may be in one case only, the more feebly in proportion as they happen to be found the less frequently repeated in the family.

to assume some hypothetical immaterial cause in the case of a material phenomenon, is accustomed to regard as the scheme or plan lying at the root of the phenomenon in question.

The conditions of our mental action, as just described, enable us to comprehend how man succeeded in arriving at the idea of symmetry. Not being able to be attentive at one and the same time with all the portions of his brain, he has only apprehended and retained individual features belonging to the phenomena. In order subsequently to recall the phenomena to his mind, he has, by multiplying the number of these individual features, filled up the gaps, which were made in consequence of the lack of the rest of the features that were not perceived, and therefore also not retained. If he represented it in an artistic manner, he did not copy the actual phenomenon, but the kaleidoscopic regular image, consisting of repetitions of the features apprehended, which he had of it in his consciousness. Every symmetrical work of man is therefore the realization of a schematic image in the recollection, elaborated by the phantasy, of imperfectly observed natural phenomena. It belongs to the first efforts of human artistic activity. In proportion as man is developed, his mind becomes capable of a greater amount of attention; he apprehends more of the elements of the phenomena; he impresses upon his memory a more perfect image of them; his phantasy has less need to replace the portions lacking by a repetition of those that are present. Thus he sees things more correctly and more accurately, and should he desire to represent them in an artistic way, he reproduces them in a more individualistic and less schematic way. The more superficial and more hasty the contemplation is, so much the more symmetrical is the recollection which is left behind by it. This is true of individual beings just as much as of nations and races. Symmetry in art makes its appearance in retrograding nations and in periods of decline. Flourishing periods and progressive nations are not satisfied with the scheme and the kaleidoscopic multiplication of individual features, but struggle to reproduce as far as possible the individual peculiarities of the phenomena.

The same tendency on the part of the human mind to complete its imperfect conceptions by a repetition of those of their constituent parts that are present in its consciousness, leads it also to other psychological phenomena besides those of symmetry; or, to be more accurate, it leads it to other applications of the latter idea besides material ones. The tales about Emperor Redbeard (Frederick Barbarossa) and the Portuguese Dom Sebastian are likewise based on this human yearning after symmetry. One part of the lives of these heroes is familiar to the people, and has been impressed upon their memories; with the other part, the end, they have never become acquainted or else they have forgotten it; accordingly, that they might not have to retain an unfinished picture of their lives, they complete what is lacking by a repetition of what is present, and ascribe to the destinies of these heroes a continuation which is maintained in the same sort of style that characterizes the beginning already familiar to the people. These tales are consequently formations of a symmetrical kind; they are evidence that man does not confine his schematizing of phenomena to visible forms.

In the case of well-developed and healthy minds symmetry produces a tiresome and unpleasant effect, because it does not develop any stimulus to a more lively mental activity. The judgment tries, whenever it apprehends a phenomenon, to design some formal law for it, to attach some scheme to it; this is, it is true, an imperfection, but it is one to which the judgment is accustomed and which it will not give up without resistance. A symmetrical phenomenon does not leave room for any work of this kind. In it there is nothing to be guessed, to it there is nothing to be added. Its formal law? It is expressed by it in a rambling and pedantic way. Its scheme? It is identical with it, and it never deviates from it in any way. There are in it no predominant features to be retained, nor is there any imperfect image of the recollection to be completed by their multiplication. The symmetrical phenomenon has already done this for us itself. It is the embarrassed work of our phantasy become material, and therefore for the latter a cause of shame. Naturally,

however, the same reasons which make it disagreeable for minds that are wide awake, make it a source of pleasure for dull and indolent brains. Any one who has never considered a phenomenon with a sufficient degree of attention to perceive all, or at all events a considerable number of its features, and to recognize that they are entirely original, only like themselves and not to any others, will find again in a symmetrical human work exactly what he might have seen in Nature. His images of the recollection are fabricated from repetitions of coarse individual features; in his mind the world is reflected in a symmetrical and schematic way. The satisfaction is afforded him of seeing his superficial perception confirmed by the symmetrical artistic object, and he experiences this last as a compliment of his flightiness. Symmetry, therefore, will always continue to be the ideal of beauty of the Philistines, who sleep with their eyes open and abhor all disturbances of the lasting siesta of their brains. Any one, however, who is not a mental Seven Sleeper will regard what is symmetrical as a caricature of his own imperfect habits of thought, and banish it as much as possible from the realm of his perception.

XII

GENERALIZATION

We were once discussing a certain nation over our beer, and had got so far as to pass a sweeping judgment upon its character and its physical and mental peculiarities. At this point one of us interrupted the conversation with the objection —"Beware of generalizations." This warning was on every hand recognized to be justly founded, and I could not offer any criticism of it. What would be out of place at a beer-house gathering may, however, be indulged in amid the quiet of one's study.

Beware of generalizations! This is a demand that is theoretically unassailable. It proceeds from the recognition, or at all events the true appreciation, of the fact that one phenomenon cannot give us with reference to another any real but only some apparent information, and that the experience which we have gained from one phenomenon will not be fully applicable to any other phenomenon, whether previous or subsequent. Every phenomenon exists in reality for itself alone; it possesses, as a matter of fact, no connection that is perceptible to the senses with any other phenomenon, and should it appear to possess such, it is simply because we artificially create it in our minds. In order to judge of a phenomenon as it is, that is to say, as it is accessible to our senses, in order to do full justice to it, and in order to be certain that we only apprehend what is as a matter of fact happening before our senses, we would have to look the phenomenon in the face with perfect impartiality, without knowing anything about it, and without prejudice with regard

to it; that is to say, we would have to forget everything that has been made familiar to us by previous phenomena, we would have to carefully avoid confusing an image previously received with the new one, or adding on to the phenomenon any features and relations which are not comprised in it, and which we transfer to it from other phenomena. This would be the indispensable pre-requisite to getting as closely to the truth as our organization is in general able to do. This would be the way to learn with tolerable accuracy what goes on outside of our Ego, and to allow reality to produce its effect upon us instead of transferring the processes going on in our Ego to the reality without, and peopling the latter with the variously coloured pictures of the magic-lantern of our thought, and thereby outshining their real contents and making them invisible.

This, as I have already said, is the theoretical demand. It does not, however, admit of being fulfilled in practice. The conditions under which our imperfect thinking apparatus is alone able to work are opposed to it. We have, in our last chapter, analyzed the very complex structure of the habit of thought, which led man to the invention of the idea of symmetry. We have seen how our mind, which perceives that phenomena always succeed one another, brings them into mutual connection, and sees in each the cause of the one that succeeds it, the effect of the one that preceded it, and how it has got so far as to conceive to itself the cause to be something actually present, essential and separate from the phenomenon, which is only partially and imperfectly rendered perceptible to the senses by the phenomenon; we have further seen that the judgment constructs the immaterial cause, which it conceives of as the necessary pre-requisite of the phenomenon, out of images in the recollection of previously apprehended phenomena, and that it produces these images of the recollection themselves by a multiplication of the individual features which have aroused the attention. It is just the same habit of thought which leads us necessarily also to generalization. For what is generalization? The drawing of conclusions from what has been the subject of experience to what is not yet the subject of experience, from

what is familiar to what is unknown, from the past and present to the future. Everything connected with this action on the part of our thinking apparatus is arbitrary and defective. We have no actual right to presume that, speaking generally, new phenomena will happen, or that, when they do happen, they will be like previous ones. The future is inaccessible to our experience. We have absolutely not a single piece of evidence to show that there will, speaking generally, be any future, that new experiences will, generally speaking, succeed the experiences of our senses. And yet we do not doubt for a single instant that to-morrow will also be a day, and that it will be pretty much a repetition of the present day. How do we arrive at this mental certainty? Exclusively by means of our habits of thought. Because hitherto every perception has invariably been succeeded by some new perception, our mind has become accustomed to the conception that this will always continue to be so and must always be so, and should it wish to fill up the emptiness of the unknown and unknowable future, it furnishes it with images of the recollection, that is to say, with repetitions of occurrences apprehended at some earlier period.

> "Nothing this day or e'en this night
> Do thou expect,
> Save what last day brought fore thy sight,"

says Goethe in his *West Eastern Divan.* The warning is a profound one, but fundamentally superfluous. For even though we did wish it, we could not expect of to-day or even of to-morrow anything save what yesterday had brought us; we are not acquainted with nor do we know anything else except what has already been the subject of our experience, and what we term the future is nothing else than a reflected image of the past, which, in consequence of an optical delusion, as it were, on the part of our thought, is imagined by us to be before our eyes, whereas as a matter of fact it lies behind us.

It is true, our arbitrary and defective assumptions have hitherto always been realized. If our ancestors counted with certainty upon this fact, that there would be a future, they

have at all events not been deceived, for a portion of this future has since become a present and a past, and a whole series of prophecies of theirs which did not depend upon any perception has since been experienced by the senses. Occurrences make their appearance in the way in which we expect them to do, and the projected reflected image of what has happened before takes a bodily form. And yet that does not prove that we are right. It has been and is invariably only a wild guess, which may luckily have turned out correct. Any convincing or trustworthy direct proof of this, namely, that things will also continue the same, will always be the same, we would not be able to adduce.

This habit of our minds to generalize, the root of which lies in the organic imperfection of our thinking apparatus, is at the bottom of all our knowledge of the world, of all the laws of nature. The latter, therefore, are nothing else than instances of self-deception. For in reality we have not the slightest acquaintance with the nature of the phenomenon of the world, nor do we perfectly comprehend a single one of these so-called laws of nature. Or, can we speak of such a thing as comprehending, when we are utterly unable to attain to any certain information as to this, whether the phenomena really have any reason? Should it not have any reason, then it could also not have any laws, but only accidents which repeat themselves, we know not how. If it be assumed, however, that there is some reason for it, and that this reason can be expressed in the form of a law, what is this reason and what are the terms of this law, which denotes it and represents its effects? There is not a single living person who has an intelligent answer to this question. When, on the other hand, we speak of laws of nature, it is simply a pleasant sort of play of words, which we have contrived in order to help us on our way across the intolerable wearisome desert of our ignorance. What we term a law of nature is nothing more nor less than the determination of the fact that certain phenomena have always occurred; it neither explains, however, in what way this came to pass nor does it comprise in itself any proof that the same phenomena will always occur. We say—it is a law of nature

that bodies are mutually attracted, and the strength of this attraction too is in direct proportion to the masses of the bodies and in inverse ratio to the square of their distance from one another. This is untrue. It would be correct to say—it has hitherto been always observed that bodies have been mutually attracted, and that too in direct proportion to their masses and in inverse ratio to the square of their distance from one another. Any explanation of the facts observed the alleged law does not furnish; it is merely a consequential way of expressing them. Mathematical formulæ too are in no sense explanations of mechanical phenomena, but simply and solely paraphrases of the same in a special kind of language. Thus the comic physician in Molière gives Geronte, who asks him why his daughter happens to be dumb, this information—"She has been deprived of her power of speech, and that is the reason why your daughter is dumb." A law is a command which directs one to do or to abstain from doing. The laws of nature, that is to say, what we designate by that term, are commands, which are issued by us after we have seen that the doing or abstention from doing in question has taken place.

We look upon it as a natural circumstance that the phenomena which we have always observed should invariably repeat themselves, and we would be exceedingly astonished if they were to cease to be observed and were to be replaced by others differently behaved. This again shows how absurd our habits of thought are. Were we logical, we would properly speaking have to manifest astonishment at the repetitions, and regard the deviations as natural, we would have always to exhibit fresh amazement at the phenomena conforming to law, and only remain indifferent in cases of non-conformity to rule. For our senses teach us that the phenomena are independent, and each separated from the other, and that they have no perceptible connection with one another; it would then be much more natural as well as rational for each phenomenon to induce a new and original experience on the senses than for it to renew and intensify previous experiences. Each phenomenon has a certain individuality of its own; how then does it come about that it bears a

certain resemblance to others? The law of nature, that is to say, the pretentious establishing of the fact that phenomena repeat themselves, is not an explanation of it but its mystery.

When a small boy I used to be familiar with and indulge in a game which in those days seemed to me very exciting. It consisted in either myself or one of my comrades of the same age dotting down points on a white sheet of paper at random, and the other then connecting these points with lines in such a way that rational figures were the result. One of my little comrades specially distinguished himself in this exercise. No matter how mischievously or extravagantly I dotted down the points, a whole crowd at one corner and none at all at the other, or a regular whirl of them, or a number of points at equal distances, he used always to succeed in making up with his connecting lines something or other that had a meaning, at one time a lion, at another a house, or again a whole battle scene with the most remarkable incidents. Nay, he became so perfect at this art as to be able to connect the points with different colours of inks in various ways, and arrange them at one and the same time into a red dog, a blue swallow, a green broom, and a yellow Alpine landscape. Our whole view of the world is nothing else than the same game carried out on a larger scale and with tragical seriousness. The phenomena which we perceive by means of the senses are the points set. They represent nothing of a rational character, nor do they permit of any intelligible connection being recognized between them. They are chaos and tumult. We draw lines, however, patiently and skilfully, from one point to the other, and, lo and behold, figures are the result which look like things that are familiar. Any one unacquainted with the mode of procedure might quite well imagine that the figures had been put upon the paper, had been already foreshadowed by the points. It would be necessary then first to show him that what makes the figures out of the points has been added to the latter by the human hand, and that the point stood upon the paper, mysterious and obscure, with its purpose in itself, before the line connected it with its neighbour, and included it in a useful way in the outline of the figure that was being worked

out in the head of the boy playing at the game. Now philosophy does exactly what my playmate used to do—it joins by means of different coloured inks the same given points into the most varied figures, and each view of the world, each system, gives to the self-same mysterious and obscure facts of experience a different connective image and, should I be driven to it, I will agree to regard each system and each view of the world as equally justifiable, that is to say, equally arbitrary and subjective, only more or less pretty and ornamental.

The names which we have devised for our arbitrary generalizations have a good ring about them, and make their appearance in the world in a way that excites confidence. We speak of hypotheses, of laws of nature. What is an hypothesis? A line which, starting from some one given point, we draw in a desired direction. And what is a law of nature? A line which connects two given points and is produced farther out in the same direction, into the unknown, into the infinite. One single observed fact is sufficient to enable us to generalize it into an hypothesis which can be neither proved nor contradicted, and which, starting from a fixed central point, may go to all the points of the compass just as it pleases the phantasy of the generalizer; two observed facts again, between which we perceive a similarity to subsist, are ample to enable us to express them in the form of a law, with regard to which we assume that it will determine succeeding phenomena right into the infinite. It is invariably the game of my childhood days over again, the connecting of independent points so as to form consistent figures!

And yet, it is of no avail, we are unable to get rid of generalization. We know that it is arbitrary and unjustifiable, we know that it deceives us, that it gives out as being the future what is the past, and as being divining what is recollecting, that it puts down as being experience what is patchwork on the part of the power of imagination, and yet our state of imperfection organically compels us, nevertheless, to avail ourselves of it uninterruptedly, and we have actually to recognize that in all probability it is the fundamental

condition of all our information, and in any event makes the latter easier for us. Every perception becomes more plainly evident to the consciousness, if it is associated with recollections and arouses these out of their state of quiescence. If we have seen an object repeatedly, and have its appearance impressed upon our memories so that we are able to represent it to our minds with our eyes shut, then we only require to look at it for quite a short space of time, and in quite a cursory way, in order at once to perceive it with the utmost clearness, whereas in the case of some other object which was unfamiliar to us we would have to look at it much more keenly and closely, and contemplate it for a much longer space of time, in order to receive from it anything like so clear a picture. This is why we are able to read our own language easily and quickly, while a foreign language, with which we are unfamiliar, on the other hand, is much more hard and takes much more time, even though it appears before us in the same kind of letters and under the same sort of conditions with respect to type, paper, light and shade, and distance from the eyes. This is why we are able to recognize a friend at a distance at which we could as yet hardly distinguish the features of a person unknown to us. It is Wundt who in his logic publishes these facts in a most excellent manner and maintains them to be one of the conditions of association of ideas. It is only in the case of a very few phenomena that, on our first meeting with them, we get any clear impression on the senses that is sufficient to give to the consciousness a well-defined conception of them. We have to perceive them repeatedly, and impress them on the memory. What we then see or hear of them is far less the phenomena themselves than the images in the recollection which are conjured up by them in the memory. This is so true that all kinds of confusions frequently enough fall to the lot of our thinking apparatus. We read, for instance, a quotation in a foreign language with which we happen to be perfectly familiar, in the midst of a text in our own language, and imagine that we see the quotation also in our own language. Suppose we find before us, "Sunt denique fines!" we read it in thought, "There is a limit to

everything!" The Latin words are seen by our eyes only in a cursory sort of way, and the consciousness does not perceive their real form, but only the image in the recollection of their meaning which the optical impression has aroused in the memory.

This sort of mechanical process explains how it is that generalization frequently makes the perception of phenomena easier for us. We retain in our memories an image of a phenomenon that has been perceived; out of this image in the recollection we shape a scheme or law; if then even but a tip of a phenomenon like it makes its appearance before our senses, it will suffice to conjure up the image of the recollection in the consciousness, and enable us to perceive the entire phenomenon. It is undoubtedly the case that besides making things easier for us this process is also at the same time a source of defects. For it brings it about that we fancy we see before us "There is a limit to everything," when, as a matter of fact, it is "sunt denique fines" that stands there; that we devote more attention to our inward scheme than to the outward phenomenon. On the other hand, however, countless phenomena, which we nevertheless perceive in this way at least defectively or incorrectly, would be passed over by us quite unnoticed, did we not already have in our minds a schematic image of them.

We might without any exaggeration say—we only as a rule see what we have already seen and expect to see. Whenever we have generalized a phenomenon, that may have seemed sufficiently striking to us to arouse our attention, into an hypothesis or a law, a whole host of facts suddenly starts up before our eyes, which up to that time had remained perfectly unnoticed. Davaine and Villemain observed that microscopic organisms make their appearance in the blood of animals that suffer from the disease of anthrax, and that tuberculosis can be transferred from one animal to the other by the agency of the matter excreted. Ten years have not since elapsed, and yet there have been discovered in fifteen or sixteen diseases of man and animals, and in a dozen or so processes of fermentation taking place outside of the organism, fungi of the schizomycetes class which are the cause of the same. One physician

observes some new disease which has never previously been seen or described. In the course of a few months a hundred other physicians publish accounts of cases of this new disease which have come under their notice in that short space of time. Heidenhain found that certain sensitive individuals can be sent off into a condition that is of rare occurrence, which he calls hypnotism. At the present time, though only a few years later, we know that practically every fourth person is capable of being hypnotized, and we stumble almost at every step over hypnotic phenomena. Did these not previously exist? Undoubtedly they did. But we did not perceive them. And why? Simply because we had not already beforehand any image of them in our minds. This is wherein the value of generalization consists. In so far as we draw from some fact that is perceptible to the senses, conclusions with reference to some other which we have not yet met with in our experience, we conjure the latter up as a matter of fact before our minds. Phenomena swarm about us, but they wear magic hoods that cause them to be invisible to us. By the aid of our hypothesis we charm their magic hoods from their heads. A law of nature is like the setter with the help of which we track the artfully concealed phenomenon. There is, however, this danger, that our dog may stand up and point at some sleeping keeper, whereas our wish was to get partridges. That happens frequently, even with the best English pointers. Most persons are inaccurate observers because they are not capable of any sufficiently high degree of attention. The consequence is that they also merely see what they want to see. Whenever any hypothesis, therefore, arises within them, they avail themselves of its assistance to construct in the consciousness an image of phenomena, and they then apply this image to everything that comes before their eyes, so that in all directions they now only see facts which appear to be in harmony with their hypothesis. There is a simple experiment which any one may repeat. Draw on a sheet of paper, or on a slate, four lines of equal length, and of as nearly as possible the same degree of intensity, in such a way that they shall all cut one another at their middle points and at right angles, and form a Latin (that is, an upright) and a St.

Andrew's (that is, a reclining) cross. Now contemplate this figure with the predetermined conception that only one of the two crosses, either the upright one or the reclining one, is to be chiefly seen in it. The cross which is desired to be seen will, as a matter of fact, stand out with greater prominence, while the other, which nevertheless is drawn with equal plainness, will appear less distinct, paler and slimmer, and seem to be only a modest appendage of the first. A false hypothesis, which happens to be in fashion, will collect about it, in large quantities, materials which seem to prove it, and with its firm basis of facts alleged to have been perceived by the senses will prevail for tens of years and hundreds of years, until some stronger brain that is capable of a greater degree of attention appears, observes the phenomena with the senses rather than with the completed image of the recollection that is in the consciousness, and makes the discovery that the phenomena do not square with the hypothesis.

With reference to this state of matters, I am unable to think of anything more amazing than the fact that philosophers could for whole centuries find matter for wrangling in this question, whether the inductive method or the deductive method was the more preferable. Induction seems to consist in the unprejudiced observation of facts, and the derivation of some law from them, while deduction seems to consist in the thinking out of some law in one's mind, and then applying it directly to the facts. Bacon of Verulam is reckoned to be the father of induction, though this method had been already practised by Aristotle as well, and the scholastic philosophers of the Middle Ages are regarded as the best examples of deductive thinkers, although the first example of scientific deduction ought really to be looked for in the Pythagorean composition of the phenomenon of the world in accordance with predetermined conceptions of numbers. If we go to the root of this matter, however, it would seem to be nothing else than an idle playing with words, which all signify the same thing! How do we arrive at a deduction, that is to say, a generalized conception of things? Manifestly only by some impression on the senses of the things, even though it should be but a fleeting one; by some observation of the things, even though it should be but an inaccurate one. The most irregular

notions that may be formed of phenomena can only be originated after the phenomena have been perceived. They are therefore inductions, nothing but inductions. Thus even the Pythagorean conception of the part that three, seven, and ten play is derived from the sensible perception of space of three dimensions, of the phases of the moon, and of the fingers. And what is induction? The derivation of a notion from some impression on the senses. The elaboration of a fact actually perceived into a scheme, a generalization, a matured conception, with which the mind will be able to approach all future facts like it. This matured conception, which we have within us even prior to the new impression on the senses, which is derived, not from the individual phenomenon, but from some other one which preceded it, and with which it has, as a matter of fact, not the slightest thing in common, is deduction, nothing more nor less than deduction. Spare me your jargon then, for it signifies nothing. The whole of our thought is invariably induction and deduction at the same time; it commences with impressions on the senses and perceptions, that is, with induction, and goes on to a generalization of these, to an elaboration of them into notions that are prominent ever after, that is, to deduction. The astronomer who calculates a planet's orbit on the basis of Newton's law of gravitation, and the Congo negro who entertains the conviction that Europeans dwell at the bottom of the sea, and emerge therefrom when they come to him, because he sees in the case of approaching vessels first of all the topmost points of the masts, and then gradually the lower parts rising up on the horizon, and in the case of departing vessels a reverse order of phenomena, these dwindling away by degrees until the topmost points of the masts also go, both practise identically the same simultaneously inductive and deductive mental action. Both observe phenomena, and derive an hypothesis from them. Both superadd to the facts that are perceptible to the senses features that are not in reality peculiar to them, that they have not, as a matter of fact, perceived in them, and that only exist in their powers of imagination. We say, no doubt, that the astronomer is right, and the Congo negro wrong. But what is our criterion? The hypothesis upon which the

astronomer works is in harmony with all the facts that are known to us, but that of the Congo negro is not so in harmony. If the latter only knew that the European had exactly the same constitution as himself, and therefore cannot live at the bottom of the sea ; if he knew further that the earth is round, and that it is its curvature which thus gradually withdraws the departing vessel from his sight ; or, lastly, if he but once visited Europe, he would see that he was in error, and would devise some other hypothesis to explain the phenomenon of the gradual dwindling away of a ship from below, and of its gradual appearance from above. And who knows but that the hypothesis of the astronomer contents us, that is to say, appears true to us, simply because we do not know the facts which contradict it ! Who knows but that we would have to abandon it if our knowledge were to become co-extensive with the facts ! Who knows but that some day better-instructed persons will smile at all our present-day hypotheses, just as we now-a-days smile at that of the Congo negro, in spite of the fact that it is thought out by the same method as the principle of gravitation, in spite of the fact that it likewise depends upon the observation of a phenomenon that is perceptible to the senses, namely, the disappearing into the sea of ships sailing outwards, and the emerging from the same of ships inward bound, and in spite of the fact that it is consequently a real case of induction !

The method of reasoning is the same among all human beings, among the Congo negroes, and even among the aborigines of Australia, just as it is in the case of a professor of science in one of our universities. The only thing that makes any difference between them is the amount of the facts known to them, and their capacity for accurate observation, that is to say, for attention, which again is the expression of a greater or less degree of development of the brain. The more attentive we are able to be, so much the more accurately will we perceive the phenomena ; the more facts we know, so much the more easily will we avoid ascribing to them features the incorrectness and impossibility of which is shown by other facts. But all of us have this impulse to generalize the individual phenomena apprehended by us, to associate them

with others to which they are not united by any connection that is perceptible to the senses, and to add on to them features which have no place in them. This habit of thought, a result of our organic imperfection, is the source of all our errors. If we allowed phenomena to produce their effects upon our senses without putting obstacles in their way of the nature of matured images of the recollection of other phenomena that had previously occurred, and that had a more or less superficial likeness to them, we might indeed be ignorant, but would not make mistakes ; we might overlook facts or imperfectly perceive them, but would not interpret them untruly ; we would have in our consciousness, it may be, a small number of conceptions, but none that were incorrect ; for the mistake never arises from the perception, but from the interpretation, and the latter is not what lies in the phenomenon, but what we add to it from the means at our command, not what the senses communicate to the brain, but what the brain makes the senses believe. We stick, however, to our defective habit of thought, for it gives us an agreeable feeling of mental wealth, in that it fills our consciousness with a crowd of conceptions that do not allow it to be divided by any feature innate in them, whether they are correct or incorrect, schemes or realities.

An Irishman, who was known throughout the whole of his village as a beggar, one day entered the inn and ordered some roast pork and a lot of whisky to be placed before him. When mine host expressed to him his astonishment at this extravagance, Paddy proudly said—" A man who has an income of about a hundred pounds a year may surely indulge himself to this extent." " What, have you an income of a hundred pounds a year ? " " Undoubtedly, for an English gentleman, whose portmanteau I carried to the railway station, presented me with five shillings, and an income at the rate of five shillings a day makes a hundred pounds a year."

Every time we generalize a perception, we act like Paddy in this anecdote, and it may quite well be that our wealth in respect of knowledge is of no more real value than the income of a hundred pounds a year of this at once inductive and deductive Irishman.

XIII

WHERE IS TRUTH?

I HAPPENED to find myself seated one evening in a drawing-room next to a lady belonging to the so-called "moneyed upper classes." It was of course necessary that I should carry on some conversation with her, and I accordingly tried to find subjects to talk about which might interest her. We very soon got the length of her last sea-side trip, and she was describing with enthusiasm how delightful it had been at Trouville, where by day she had put startling toilettes on exhibition and in the evenings played baccarat at the Casino.

I hazarded the question whether she could not conceive of some better way of spending human life?

"No," she rejoined very decidedly; "if that is done which produces a perfect and complete enjoyment, all that is proper has been done."

"And don't you think," I went on to ask, "that those people are to be pitied whose toilettes and evenings at baccarat produce a perfect and complete enjoyment?"

This remark was undoubtedly an impertinent one. I received the sharp reply—"Good God, it is not in every one's power to write books."

"No doubt. But is not book-writing possibly a more worthy and more noble occupation than that of exhibiting toilettes and playing baccarat?"

"By no means. The one is no better than the other. The former amuses some, the latter others. I fail to see any difference."

"The majority of people, however, is surely not of this view?"

"I am not aware of that. And what is more, I don't trouble myself about it. In *my* world everybody certainly thinks as I do, and what other people think is a matter of indifference to me."

"The best and most renowned persons, however, rank intellectual occupations higher than playing and lounging about, and the writer of books is more looked up to in the State and in society than the player of baccarat and the person who displays brilliant toilettes."

"Do you think so?" she said, in an inimitable tone of voice; "I have never observed that to be the case. Wherever I have hitherto been, those whom you term players of baccarat, and persons who display brilliant toilettes, have had more consideration and respect paid them than writers of books."

I was as soundly beaten as it is possible for a man to be, and had to acknowledge my defeat. There were accordingly here two opposite points of view, each of which honestly regarded itself as the only correct one, and neither of which was able to displace the other. The reasons in favour of the one conviction were not opposed in any way to the other, and not one of these reasons possessed any resistless characteristic of absolute correctness and authority in itself which could compel every human mind to comprehend it as truth, and everything that was contradictory to it as error.

I am acquainted with a lady who is ill-favoured in respect of looks, and indeed is afflicted with a bodily defect (in fact, she is lame), and whose intellect is a few gooseheads' lengths below that of a clever poodle. She enjoys the society of men, however, and knows how to provoke their gallantry by meeting them in an unreserved way. It is of course at once seen that compliments are agreeable to her, and that she can bear them up to any amount, and, as compliments now-a-days are even cheaper than blackberries in Falstaff's time, as many are paid to her as she cares to have. The lady is now nigh upon forty years of age, and she has experienced in her life none but happy hours. She is firmly convinced that she is the fairest, cleverest, and sweetest embodiment of womanhood; that every man who looks at her falls desperately in love with her; that her

bodily defect even enhances her irresistibility. The men all say so to her, because she desires them to say so and herself believes it. Any dissentient opinion she has never heard. Should ladies not share the enthusiasm and the admiration of the men, it does not disturb her in her self-consciousness in the least degree ; for, of course, the ladies are her feminine foes because they envy her. No one will ever betray to her the fact that all the men have made sport of her throughout her life, and on her death-bed she will probably say to herself—"My life has been one complete, endless, incomparable triumph, and in me dies the woman whom all my male contemporaries have declared to be the fairest, cleverest, and sweetest of my generation." This will to her appear perfect and absolute truth, and nothing will excite in her even so much as the slightest doubt that she may not nevertheless perhaps have been the victim of a delusion.

In February of 1881, in Paris, the idea occurred to one or two young people, collaborators in some little obscure paper, to make themselves notorious and the subject of talk. They decided to institute a "national apotheosis" in honour of Victor Hugo. They began by forming themselves into a "Victor Hugo Celebration Committee," and nominated a large number of really distinguished individuals—of course without having previously asked their permission—as members of the said committee. The splendid list of names appeared in all the daily papers. The latter did not venture to refuse the puffing paragraphs with which they were for the next four weeks daily inundated ; for who will allow it to be said of him that he is no patriot, or that he has no heart for a national glory? The public were made to believe that the subject under discussion was a demonstration, the idea of which had arisen independently in a hundred thousand heads ; the authorities were compelled to take part in the arrangements; the movement actually carried along with it ingenuous and puff-loving people in foreign countries, who availed themselves of this opportunity to see their names printed in the Parisian newspapers. On the day set apart for it the great demonstration duly took place. About fifteen thousand persons marched in procession past Victor Hugo's house ;

among them were about two thousand itinerant dealers with anniversary medals, badges, poems and the like, who wished to do some business on their own account; nearly ten thousand sightseers who wished to view the fun, of whom, too, scarcely the half had read a single volume from among Victor Hugo's works; and lastly, some three thousand harmless persuaded spirits who had really allowed themselves to be drawn into a frenzy of enthusiasm. Next morning the report might be read in all the Parisian newspapers that five hundred thousand persons had saluted Victor Hugo with cheers and enthusiasm, that Paris had witnessed a celebration which would occupy a place by itself in the world's history, and that the whole of civilized humanity had united with France in preparing a triumph for the greatest poet of the century, the like of which had never before fallen to the lot of mortal man. Foreign newspapers copied this report, and the legend became spread all over the globe, and now-a-days counts everywhere, even in Paris itself, as unassailable matter of fact. Future historians of our manners will cite it, and fail after the most determined search in contemporaneous sources to find anything that might lead them to doubt that everything did not indeed really take place in the way that is narrated in the newspaper press of both hemispheres.

Such is the state of matters with regard to truth, when the subject under discussion is an occurrence that took place before many thousand eye-witnesses.

But do things go any better with us in the case of other phenomena that are not of this transient character? What do we know about all the natural relations in the midst of which we live? Facts that are to all appearance of the simplest order turn out to be uncertain, and laws that reckon as the most firmly established, and most surely founded, totter perilously beneath the foot of the investigator. Only those who are semi-cultured, who receive their information credulously and without distrust, at the hands of inaccurate compilers and popular lecturers, believe that they possess trustworthy and unassailable truths. Those who are really learned, however, who derive their facts from the prime sources of observation, know that perhaps there is not a

single one which is so certain that it does not admit of two different interpretations. We talk volubly—frequently too with a considerable amount of self-complacency—about the distance of the earth from the sun, nay, even from Sirius, and yet we know not, as a matter of fact, so much as the length of the line from the Washington Observatory to that of Cape Town. The calculations which have been carried out by the greatest astronomers of the time, with the aid of the most perfect instruments and of the most approved methods, vary from one another to the extent of more than an English mile, or nearly a ten-thousandth part of the entire distance. The exact length of the astronomical day, that is to say, the actual endurance of the revolution of our earth on its axis, is still doubtful, as is also the true position of this axis, that is to say, the angle at which it is inclined to the orbit of the earth round the sun. The estimates of the number of degrees of heat of the sun vary from two hundred to twenty thousand, and even so eminent an investigator as William Herschel was able to propound the theory that the surface of the sun's nucleus is solid and inhabited by living creatures.

The natural sciences have consequently up to the present time been unsuccessful in getting perfectly close to the truth, or even in establishing their own certainty. What is more, they are opposed to phenomena that are uninterruptedly revealed before our eyes, that do not change so far as we can see, that patiently wait for man to follow them up, reach them, enclose them in contrivances, pinch them with tongs, try them with the fingers and with instruments, turn them round, incase them, peer at them inside and outside, and in short deal with them in whatever way might seem necessary and useful to him. Now what is to be said of the historical sciences, that presume to discover the truth of those phenomena which took place in the distant past and of which nothing has been left in our hands or before our eyes, except some half-covered tracks on the deep sand or some indistinct echo or something else of still less account?

I do not wish to be unjust with respect to the historical sciences. They occupy in the encyclopædia of the sciences a remarkable and singular position, for in contradistinction

to all the other sciences they do not work with generalizations and are acquainted with neither hypotheses nor laws of Nature. They are the only sciences which fulfil the requisite of knowledge laid down in our last chapter; they try to grasp and represent the phenomenon in the way in which it has been actually perceived by the senses, and punctiliously avoid adding to it immaterial features that do not belong to it. Since the phenomenon is what has as a matter of fact taken place, and since its interpretation, its generalization, its connection with other phenomena, whether simultaneously, previously, or subsequently, its derivation from causes outside of it, and the tracing back of it to laws are what has been arbitrarily added on, and since it is only the sensible perception of the phenomenon that can lead to knowledge, while everything of the nature of conjecture, or addition to it, etc., exposes to error, it would seem to follow that history, which makes it its aim solely to hold the phenomenon fast, on the principle to keep out of the road of anything in the way of addition, and to avoid conjecture as much as possible, would really be the most trustworthy science, that, namely, which contains the greatest amount of truth and the least number of errors, and which includes in itself the largest total of objective phenomena and the smallest sum of subjective imaginative work. In contradistinction to mathematics, which may easily be subjectively true, because it is nothing else than a form of human thought, and occupies itself not with external processes of a kind that are perceptible to the senses, but with those that take place in the consciousness itself, and that are apprehended without the agency of the senses—in contradistinction to mathematics, I say, which is the science that is most true subjectively, history would seem to be the most true objectively, because it has for its object, not what is possible, probable, or what appears to us necessary, but what is real, what is actual occurrence, and because its contents are not subjective hypotheses but objective phenomena. Yes, would seem to be! History would be all this if the human thinking apparatus were not just the imperfect piece of apparatus that it is. This state of imperfection it is that brings it to shipwreck; it causes its

efforts to reach the objective occurrence to prove prospectless. History aims at representing processes as they have as a matter of fact taken place; it can, however, at best only put them forth as they have been perceived. The conditions, however, under which our brain labours, prevent the perceptions of the processes being by any possibility identical with the processes themselves. For either these last are insignificant, in which case they fail to arouse any degree of attention and will not be distinctly apprehended, will not get the length of the consciousness, and will not leave behind any plain image of the recollection; or they are of importance, in which case their first phases at once arouse so high a degree of attention that the nerve energy is very soon exhausted, the brain loses its capacity of perception, and the farther phases of the process float past like a confused dream. Whence it arises that, to take an example, no participator in any great occurrence, in a battle, in a bold stroke on the part of conspirators, or in an exciting parliamentary scene, retains any accurate picture of the process from beginning to end. Were one to listen to a thousand witnesses, they would give a thousand different depositions, which would vary from each other in just the most important points in the most remarkable way. Only a machine which is driven by clockwork, and so could expose a fresh photographic plate every second to the occurrence, and obtain an uninterrupted series of instantaneous pictures of it, could be depended upon to at least retain its optical appearance. Our organism is not a machine of this kind. We do not possess an endless series of ever fresh photographic plates, but only a very limited supply of them. Should this supply have become exhausted, then we would find ourselves in front of the occurrence like an unloaded camera, and we would have to take a thorough rest before we could prepare new plates. For this reason it is that participators in occurrences are the most uncertain observers of them, for this reason it is that the evidence of all witnesses is only subjectively true, for this reason it is that the science of history has no means left to it wherewith subsequently to reconstruct the absolute objective truth of occurrences with the aid of human subjective perceptions.

Note well that the history about which I have hitherto been speaking is that ingenuous kind which merely relates events without putting forward any claim also to explain them. It is the history of those chroniclers who faithfully notify that on the first day of the month it rained, that on the second a battle took place, and that on the third a new pope had been elected. This primitive point of view, which at least made it theoretically possible to lay hold of the truth and to avoid error, is no longer, however, the point of view of present-day historical investigators. These last want not only to narrate events but also to explain them. That habit of human thought, of adding on to material phenomena immaterial features, of subordinating them to laws and making them to be preceded by causes, in short, the game of joining points together by arbitrary lines so as to form figures, could of course also not be avoided by history, and the boldest cultivators of this science would even convert it into a natural science, or, in other words, schematize its material in the same way as natural science schematizes the phenomena of Nature. They would trace the occurrences of which humanity has been the stage back to universal laws of Nature, invent hypotheses and formulæ for them, and with the aid of these predict future processes, just as we are bold enough, with the aid of scientific formulæ, hypotheses, and laws, to predict that the sun will rise to-morrow morning and that the trees will bloom next spring. They are, too, perfectly justified in what they do. There is indeed no reason for treating human occurrences in a different way from all the other phenomena in the universe. Is not man, is not humanity, as much a constituent part of this universe as the quartz rock, the meteor or the palm tree? Is not a human thought or action as much an organic process as digestion and propagation of the species, as the migration of birds, or the hibernation of rodent animals, such as the squirrel?—is the thought or the action not just as much a dynamic process as the fall of a free object or the revolution of the moon about the earth? If we put forward the claim, not simply to describe these organic and dynamic processes, but to schematize them and connect them by an immaterial tie of

hypotheses and laws, so as to form intelligible figures, why not apply the same method also to human thoughts and actions? And this is even what we do, though we depart at the same time from the sure ground of what is present and sensible and fly out into the extra and super-sensible. It is only when we act so that history becomes rational, in other words, it is only when we act so that it becomes in harmony with our habit of thought, which we have come to recognize as an unavoidable result of our organic imperfection, and yet when we do act so it becomes at once the place of exercise for all the subjective errors of our thinking apparatus, for every occurrence has only one form that is perceptible to the senses, whereas, on the other hand, the number of the immaterial hypotheses under which the human mind is able to bring it is unlimited, and unlimited therefore also is the number of possible errors.

One school for teaching the art of writing history explains processes by reference to the persons who took part in them. It ascribes to external influences the part of an impetus at most, and locates the actual instigations and impulses of historical acts in the spirits of the leading personalities for the time being. According to this view, the science of history becomes psychology and the writing of history biography. In that case humanity can be thought of as practically independent of Nature, and all influences might be disregarded which any general powers of Nature and the changes in the condition of equilibrium of the same may have exercised, as well on nations and individual persons as on all other organisms. In that case one would be justified in writing anecdotal history, and in making the decline of great states to depend on the state of some general's digestion. Helen's fair eyes would in that case be made the cause of the Trojan war, the French defeat at Sedan would be due to the circumstance that General Wimpffen quarrelled in 1869 at Algiers with Marshal MacMahon with regard to the presence of a woman of doubtful character, the mistress of the former, at a charity bazaar got up by the spouse of the latter, and Scribe's comedy, *A Glass of Water*, would comprise the real explanation of the reasons for the War of the Spanish

Succession running the course it did and not some other one. If we advance still a step farther, and assume with Wundt that the force which holds sway in the human consciousness and elaborates conceptions, comes to conclusions, and so on, is an undetermined one, that is to say, is not compelled to action by external stimulation, or in direct proportion to the strength of the stimulation, then the last connection between man and the forces which hold sway outside of him is rent asunder, and an exclusively psychological mode of writing history, which is based upon Wundt's point of view, can put every occurrence down as a manifestation of an accidental and arbitrary mental process in some powerful individual or other, which manifestation is not prepared by anything nor dependent upon anything foreign to it.

Another school for teaching the art of writing history, which, by way of distinction from the psychological school just indicated, I will term the scientific, sees in occurrences the effect of universal laws of Nature. According to its view, one nation wages war because it is hungry and not because its king or head-man is in a temper. The individual human being loses his influence and disappears amid the commotion of the masses. He imagines he is pushing and is pushed. Proper names cease to have any value or importance and may just as well be wiped out of history. Nations act and suffer, just as trees bloom in spring-time and throw off their leaves in the autumn; historical occurrences are but the outward manifestations of cosmical laws, and the fall of states is settled, not in the boudoir of some fair lady or in the private room of some clever minister, but very properly among the stars. Astrology receives an unlooked-for vindication, not as it is practised as a matter of fact, but as a theory, as a foretaste of the true relationship of things, and we have no right any longer to smile when on seeing a comet the people entertain anxiety lest it should bring war. Has it not been fancied that a coincidence was noticed between the appearance of sun-spots and great commercial crises? Of course this conception does not imply that the list of prices of the chief commodities is altered, or that all desire to buy them is suppressed owing to the direct inter-

vention of the sun-spots; it is not doubted that the effect is a very indirect one; but the intermediate links in the chain are not known, only their beginning and their end are. Why then should it not be thinkable that astronomical phenomena, processes in the sun, in the planetary system, or in space, ultimately induce conditions of excitement in men, wars, revolutions, periods of progress and of consistence?

There is no need to insist so exclusively on the one or the other of these points of view; one foot may be placed upon each, and it may be said that the universal forces of Nature are in fact in historical occurrences, just as much as in all other phenomena, the impelling power, though the direction is given to them by select human individuals. In that case human personality would again to some extent enjoy its traditional rights; it does not indeed make histories as a poet evolves dramas by the power of his imagination, but it controls the nations just as a mechanic controls a railway train on its given track, causing the locomotive at his pleasure to go faster or slower or to come to a standstill. The man of genius is then a pretty considerable experimenter with humanity; his feats indeed are created by him just as little as, for instance, the circulation of the blood was created by Harvey, but he invents the mechanical laws which are at work among the nations and he tests them by applying them. In that case, moreover, it would also be intelligible how it is possible for "the world to be ruled by a little wisdom," since the ruling of the world would be in the hands of the laws of Nature, and its apparent rulers would have merely to refrain from disturbing them.

There are here three hypotheses; all three of them are equally obvious and equally arbitrary; none of the three can be contradicted, none can be proved. All three cannot be true at the same time, though undoubtedly all three might prove to be false. What confidence then is to be reposed in a science which is necessarily dependent upon one of these three hypotheses, and therefore may in every case possibly be dependent upon a false one? Here again a murderous dilemma impales us on its horns. Either history is purely objective and records occurrences simply as they have taken

place, in which case it will be devoid of substance, because it is not possible for it to represent occurrences in their objective reality; or it is subjective and hypothetical, tries to explain and ascribe causes which do not form an element of the occurrence that is perceivable to the senses, in which case it no longer offers any guaranty of the truth, and may from beginning to end be a tissue of individual errors.

The analysis of the phenomena counts as one means of approximating the truth. Now is this means one that is appropriate to the end in view? As to this one ought to entertain serious doubts. Analysis will not perhaps lead to a knowledge of the nature of the phenomenon, but it certainly demolishes the phenomenon as such. Let us take quite a superficially intelligible example. I have in front of me a person in a soldier's uniform. I show neither hesitation nor vacillation, and at once say definitely—That is a soldier. Now I begin an analysis of this phenomenon. I withdraw the uniform from it. What have I now left in front of me? No longer a plainly indicated differentiated phenomenon, but something more indefinite and more general, a man of the white race. If I pull the skin from off him, he is simply a man generally speaking, and can hardly be distinguished from a negro or Indian. If I carry the analysis still farther and place a piece of muscle under the microscope, then I am now merely able to say that the phenomenon was part of an animal, though I know not either that it had belonged to a man, or that it had belonged to a white man, or that it had belonged to a soldier. If finally I analyze the muscle into its chemical constituents, then there will remain for me of the phenomenon absolutely nothing over that is distinctive and essential, and I can only now say that it has been made up of materials which are present in our planetary system. In this way I have with my inexorable and constantly deepening analysis happily brought matters to this point, that I have made out of a plain and matter-of-fact soldier, who cannot be confused with anything else, some oxygen, carbon, etc., which might have originated just as well from a nebular world as from a Havana cigar. All the qualities of the things which we apprehend by our senses are movements.

Those that alternate not less than sixteen and a half and not more than sixteen thousand eight hundred and ninety-six times per second we count with our nerves of hearing, and we apprehend as sounds; those movements that are repeated per second between three hundred and ninety-five and seven hundred and sixty-five billions of times we count with the nerves of vision and experience as light and colour. For the movements that take place between sixteen thousand eight hundred and ninety-six times and three hundred and ninety-five billions of times, or less than sixteen and a half times, or over seven hundred and sixty-five billions of times, we have no organ which counts and therefore also no perception. The perception of a phenomenon is therefore nothing else than the counting of movements; wherefore all phenomena are identical in their nature and only different in respect of their multitude. That is the result of an analysis being carried to a very great length. All very fine. The beautiful and the ugly, the bright and the obscure, the delightful and the distressing, are consequently all the same thing, always but a movement, a slower or speedier movement. But how is it then that, nevertheless, I experience these various movements, which are all the same thing, as different, that the one is agreeable to me, while the other is disagreeable to me, that the one is a source of satisfaction to me, while the other is a source of trouble? Here again I get just as far as I did in the case of the analysis of the soldier into his simple chemical elements. I have sacrificed the plain, comprehensible phenomenon that appears distinct from all others, and yet have not got to know its nature by way of exchange.

Experience of this kind makes us distrustful and causes us to harbour the suspicion that we have stated the problem falsely from the very beginning. We look for the nature of things and demolish their phenomenal form. Is not the phenomenon the nature of the thing itself, and in analyzing it do we not simply act like the child, who, out of curiosity to discover what is included in an onion, tears off one layer after another, and, when the last of these has been thrown away by it, holds nothing more in its hand? This does not mean denying the "thing in itself," but misplacing it on the

surface of the phenomenon instead of in its secret and inaccessible depths, and identifying it with the phenomenon. We also try to find objective absolute truth. And who is there who will say that our very starting-point is not an error? What ground have we for knowing that there is any objective absolute truth? Suppose that what is unknown, what causes our sense-impressions, does not become a comprehensible phenomenon until it gets into our organism, and has absolutely no existence as such outside of our consciousness! Now-a-days it is generally allowed that phenomena outside of our consciousness possess neither colour nor sound, neither odour nor heat nor cold, and that these qualities are added on to them in our organism. May not this equally well be the case with all the circumstances connected with the phenomenon? In that case the phenomenon would not in general assume its human comprehensible form until it came within the organism, and there would be no objective and absolute truth, but only a subjective kind of truth, which could be the same for two persons only when their organisms happened to be identical; and further, in that case every attempt to discover any objective truth would be perfectly prospectless, and we would be more than ever condemned to look for all knowledge exclusively in our own consciousness and never outside of it.

At these great heights of thought it gets rather cold. I feel chilly. We will descend therefore to regions lower down where we shall be nearer to the down-right practical but comfortably warm bustle of humanity.

XIV

THE STATE AS AN ANNIHILATOR OF CHARACTER

HUNDREDS of times has the fuss which the Germans make over ranks and titles been held up to sport, and the ridicule that has been poured out upon it in prose and verse would fill a whole library. The matter is, however, not exhausted, and in particular certain aspects of it have as yet hardly been touched upon. Thus not nearly enough of stress has been laid upon the danger which threatens the development, nay, the existence of a people in consequence of its elevating the peak of the mandarin's cap as its private and public ideal.

Go into any society in Germany and take a look round. You will find there assessors and inspectors, majors and councillors, in particular councillors of every complexion and every size, from the unpresuming commissioner up to the highly respectable acting privy councillor. Every occupation has its own special councillor, who is so to speak its blossom, and the only wonder is that there are still one or two occupations which do not possess a blossom of this kind, and therefore form the cryptogams of the state flora. It would be so nice if even the most genuine beggars or wine-bibbers could hope to retire for the declining years of their prosperous careers adorned with some suitable title which might sound like councillor of the ring or councillor of the beerhouse. You would search in vain among all these councillors for a homely simple man who allows himself to rest satisfied with his Christian and surnames, even though you were to go round with a Diogenes' lantern which stood in every way at the top of the latest development in the art of electric lighting. The

footman who hands round the almond milk is to all appearance the only representative of the genus *Adam Homo* without an appendix, but appearance is deceitful even in this case. For as frequently as the state has the opportunity of occupying itself with him in an official way, whether it be by summoning him for his taxes, or prosecuting him for some nocturnal breach of the peace, or nailing the universal mark of honour to his breast on account of many years of careful attention to the boots of some general or privy councillor, it does not address him as "Frederick William Müller," but adds to this a distinguishing title, thus, "Frederick William Müller, footman." That is not a specially high-class title, but it is nevertheless a title. It at all events occupies the place of a title and keeps it warm. It marks the fact that something should stand in this place. It keeps alive the habit of seeing a handle fixed to one's name as it is to a stew-pan. The state is afflicted with a modesty of a rather special kind. It makes it shudder to see a naked name before its eyes. Fye, for shame! Make haste here with the mantle of a title! or at least with the fig-leaf of a nominal profession! Notwithstanding the fact that mathematics also believes greatly in exactness, it spares itself signs whenever it can do so, and strikes this bargain with us, namely, that whenever there is no sign at all before an expression we are to assume that a plus sign precedes it. The state does not make any such admission. Every name must have its handle. Any one who is nothing else receives at least the title of "Esquire." How very German is the exclamation which the man in the *Fliegende Blätter* utters from his heart—"Though I should be nothing at all, yet am I at least a contemporary!"

If a man has been introduced to you as Councillor So-and-so, then you know everything which you need to know about him. Don't trouble therefore about getting to know his personality; you do not need to so much as look at his face, and still less to note his name. These are matters of subordinate importance. The essential thing is the councillorship. This gives the complete definition of the man. You can learn from his title with infallible certainty what he is and what he does; what he has learned; what he likes and

what he dislikes; how and where he spends his days and nights; how he thinks about all kinds of subjects, from free-trade to the immortality of the soul, nay, in many cases actually how much money he earns. It is a glorious feeling of certainty that comes over you when in the presence of a man so titled. There is no puzzling veil here which conceals the face of a mysterious Isis. Maya stands disclosed to view in a satisfactory way and leaves for you nothing to seek, nothing to guess. My only astonishment is that some simplification of matters has not yet been hit upon which would recommend itself as being very practical. Why should these titled gentlemen still be left any proper names at all? A name of this kind seems still to remind one of a personality, whereas the highest triumph of these gentlemen is indeed not to have any personality, but a rank, a position, a title. This is after all the main thing, the man is only the unessential appendage. All right, let us suppress the latter completely, and let us designate every title-bearer henceforth only by the number of the page and line in the state register, or the book of dignities, or the army list, in which he may happen to be included. Or should this appear inconvenient, let us give him a definite easily remembered name which is for all time to be that of the occupant of a certain position, and will be assumed simultaneously with the title. In that case there would be put on besides one's uniform also a name, and one would become entirely merged, skin and hair and all, in the rank and title assumed. The fine gentlemen in the France of last century knew how to live. They had one particular surname for every man-servant, and to this name every youth who entered their service had to answer. For instance, the valet de chambre was called Jeunesse; the gamekeeper, Picardie; and the coachman, Victor; each taking over his special name along with the livery from his predecessor, and handing it down to his successor. In this way the masters, who had no object in distinguishing individualities, but only cared about seeing a regular kind of service regularly performed, were spared the necessity of practising mnemonics in regard to the servants' hall.

The matter would not after all be so bad, if it were only

the official class that felt this childish joy in their titles and that accorded their uniforms a greater degree of importance than their persons. But this phenomenon is in truth not confined to those classes among which a title undoubtedly corresponds at least to some form of action, and a uniform is not a mere fancy-dress costume but an official robe; it is prevalent throughout the entire nation, and can be observed in the case of countless people who are at most only thus far connected with the state service that they add units to the enumeration of the people for the purposes of the official census. Even in his private life the German makes efforts to gain some state recognition or other, some mark or brand which will testify to his being a member of the electoral herd. So long as the state does not take official cognizance of his existence by investing him with some title or other, he cannot as it were believe in his own existence. Without one of these so-called distinctions he does not feel like a perfect man, but at most only as the mouthpiece of such a man. He looks upon his occupation as the foundation for a title, and the natural destiny of his breast seems to him to be for the wearing of an order. Free-born, independent men, instead of priding themselves in relying entirely upon themselves and in not wishing to owe anything to anybody, give away their independence, which is of more value than Esau's birthright, for a mark of favour which is of less importance than Jacob's mess of pottage. When feudalism became established as a system, freemen were made to place all their possessions in the hands of the great nobles and receive them back from them in the form of a feudal tenure like a gracious gift. Now-a-days the same thing is done without either necessity or compulsion which the proud races of those days were only willing to do after obstinate resistance.

This ladder, whose rounds are the ranks of official life, is in Russia called the Tschin. Every Russian has to stand on some round or other of this ladder if he wishes to count in the world as something more than a herring does on the bank that is its home. The Tschin has not, however, remained an exclusively Russian institution, but has found its way across the border. The ladder has been set up in

Germany also, and the world has thus before its eyes the astonishing spectacle, how the first and most powerful civilized nation on the face of the earth passes its life, like a collection of trained tree-frogs, in solemnly climbing up from one round to another of its ladder. The development of the individual takes place, not from within outwards, but by some external addition ; not as it does in the case of an organism filled with vital energy and self-acting, but as it does in the case of an inanimate, inert stone. It is the state that adds on new inches to the individual's natural height and from time to time makes him about a head taller. This growth consists, not in any elevation of the character but in a lengthening out of the title. The personality loses a quality, the title gains a new epithet. The temperament grows poorer, the ornament representing his rank grows richer.

And woe to the individual who tries to withdraw himself from this universally prevailing voluntary servitude! He is regarded as the wolf at large was by the house-dogs in the fable. Or more correctly speaking, he is absolutely not regarded at all. Grimmelshausen tells of a remarkable bird's-nest, which made him invisible who carried it about with him. A title has the reverse effect from this remarkable bird's-nest. A person only becomes visible when he carries it. As long as he is without it he is left utterly unnoticed by society, he is a phantom, an aërial form. The man who, of his own organic energy and obedient to his inner law of growth, has become developed into an individuality which must be considered and measured by itself alone, and can only be comprehended in its originality and beauty when it is free from all those external arbitrary accessories that only disturb the outlines and make the phenomenon as a whole confusing—such a man disappears behind these insignificant puppets who are made of service merely as wearers of uniforms and badges of rank! The child in the anecdote is made to say that he did not know whether the children whom he saw bathing were boys or girls because they did not have their clothes on. Society stands on the same point of view as this child. It does not comprehend what is human unless it makes its appearance in some particular costume. It merely recognizes

a man when he appears before it in full dress with his rank and titles. This idea compels every one who has the justifiable wish to count as something among his fellow-citizens, to desert his natural course of development and become one of the throng that moves forward with sleepy harmonious paces in the track prepared for it by the state and guarded on the right and left by riflemen. The view accordingly springs up in the individual's mind that his original life, which he has received from Nature, counts as nothing, and that he must, in order to enter upon a real existence, be born a second time with the assistance of the state as some councillor or other; just as in India the members of the three chief castes are "dhwitschas," that is to say, have, though they are full-grown men, to undergo a ceremonial symbolical of a second birth, consisting in their clothing themselves entirely in white and passing amid all kinds of formalities through a narrow little doorway.

What a lamentable retrogression to a long-past stage of development! What a contradiction to all the fundamental thoughts and active forces of the time! The more highly cultured an organism is, so much the more original, so much the more differentiated it is, and so much the more does the race take a subordinate place to the individual in it. And not individuals alone, but even communities are subject to this law. In ancient times and in the Middle Ages the community as such was organized as a solid whole and the individual reckoned merely as a part of that whole. Then it was neither possible nor considered proper for a person to be original, and he had to dispose himself according to the accurately drawn architectural plan of the state, the community, the corporation, or the guild. Any one who had not been assumed by the authorities or privileged societies into their body was as a wanderer outside the pale of justice and outlawed. This stage in the development of society corresponds to that of a polypus stem in which the various individuals have grown together, are imperfectly developed, and are devoid of organic freedom, are able by themselves alone neither to live nor to move about, and never rise above a subordinate and stunted partial existence. Now-a-days we have got beyond this. We do not any longer have the form

of a coral construction, though we are certainly now a flock. Each individual leads a separate existence, though all indeed are in respect of certain functions dependent upon one another. The tie of joint responsibility which binds us all together leaves us nevertheless a sufficient degree of independence, and the organic possibility is accorded to every one of us to graze on his own account. This individualism, the acquisition of modern times, is voluntarily sacrificed for the old collectivism in which the individual is merely a cell, less than an organ, a quivering senseless nothing. For this is where one gets by a natural necessity, if it is recognized that all value and all worth can only fall to the lot of a man from the hands of the powers that be, and that, with regard to his position among men, a certificate which gives him a name or invests him with some dignity is more influential than original merit, mental distinction, and achievements that have not been accomplished within the sphere of the official sheet.

What is it that is called the state? Theoretically the idea includes all of us! Practically, however, it means a ruling class, a small number of special individuals, and frequently merely a single person. To regard the recognition of the state as above everything else means the desire exclusively to please one class, a few persons, a single individual. It means developing oneself in accordance with some goal that is not afforded by Nature itself but is set up by some other person's thought, perhaps even altogether by some other person's whim. It means the renunciation of one's inmost being and the formation of oneself in accordance with some outward model which is possibly opposed to all one's original qualities and tendencies. The entire cultured class in a nation becomes transformed in this way into a species of Jesuit order, the members of which have offered up "the intellect as a sacrificial victim," and renounced the right of thinking with their own heads and judging with their own consciences as to right and wrong. People do not fashion themselves in accordance with their organic impulses, but pour themselves out in drops like molten metal into a mould which is made ready for them by the authorities, and base their pride upon the fact that, instead of being living beings

with a physiognomy of their own, they are of the number of those cheap zinc figures that are sold by the dozen for clocks. By means of this process of smelting and moulding, the crystalline structure of a people becomes disintegrated and its solid kernel becomes destroyed. The beautiful and rich multiplicity of natural processes of development gives place to a forced paltry uniformity. If an individual is insidiously asked what his thoughts are about some subject or other, he will not know what to say off-hand, but will have first to go quickly to the chestnut grove and there get the specified password. Millions renounce their rights of majority and place themselves with all their thoughts and actions in a state of tutelage, the close tyranny of which they soon cease entirely to feel.

Please do not start the objection that matters cannot be ordered otherwise, and that even I myself have demonstrated completely that the masses in general are incapable of original, independent mental work, and that this is exclusively performed by exceptional persons, and is transferred by means of suggestion from the trifling minority to the vast majority. There is indeed a mighty difference between the case of the thoughts of a single individual or of a few persons being instilled into an entire people by natural suggestion, and the case of these being instilled into the brain by compulsion and power.[1] In the first case there is no disturbance of any organic powers; only those who are incapable of individual thought fall unconsciously under the influence of the superior mind and necessarily become its servile followers. In the second case, on the other hand, a natural development is obstructed and suppressed, and even gifted and strong minds, that are adapted for the production of new and original mental work and for the increasing of the intellectual wealth of their people and of humanity at large, paralyze their brain activity intentionally and with conscious exertion of the will, in order to be able to imitate in their thoughts without altering them the previously thought official normal thoughts of the entire nation, and thereby make themselves worthy of some political recognition. It is the same difference as sub-

[1] Cp. also the note on p. 181.

sists between the inactivity of small children and the dilatoriness of men at harvest-time. The former is provided for and is intelligible in itself and does not cause any damage economically; the latter, however, would reduce a people to beggary if it were to become universally prevalent.

The task of government is naturally rendered by such a renunciation of human independence on the part of the masses simple to a high degree. The poodle is never so perfectly at rest as when a piece of sugar has been placed upon its nose and made the prospective reward for its steady waiting for the permission to snap it up. A people that only esteems a man when he has undergone his magisterial rebaptism in the official gazette, and owing to this habit puts the desire into all his more distinguished fellow-citizens, nay, compels them, at any price, to force their way into the sanctuary of this official sheet—such a people, I say, is altogether in the hands of its government, that is, of its ruling classes. The thought—" What will people in high places say about this? " is the constant companion of all its citizens, and gazes over their shoulders at their most secret tasks, intentions, and conversations. Watched incessantly by this overseer, the citizen loses the necessary and fertile practice of being alone with himself and his own conscience, and becomes as uncertain, as comic, as much of an eye-servant, as must be the case when it is known that one is being constantly observed by a critical witness. But the government has naturally the greatest interest in keeping up a condition of this kind. It prevents inconvenient opposition on the part of public opinion. It lays a great country at the feet of a minister and a few prominent councillors. It squeezes the independent men into citizens of a second-class order, to whom a defect attaches, in that they can never ripen into perfect men at all, titled and distinguished with orders, and gives to all political opposition towards the government in the eyes of the masses the character of what is dishonourable, the character of an act which takes away from the perpetrator those honorary rights that are regarded as the most valuable, namely, those of one day decorating his button-hole with a coloured ribbon and of adding a title to his name.

This is a state of matters which is not only lamentable, not only immoral, but also extremely dangerous for the future of a people. I believe I have read in *Vasari* that Michael Angelo, after having been engaged for twenty-two months in painting the ceiling of the Sistine Chapel, became so accustomed to look upward that he was quite unable thereafter to look straight in front of him, or to the right or to the left, as a person naturally does, but had even to hold writings which he wished to read with upstretched hands above his eyes. The same thing happens to a people that has acquired the habit of always squinting upwards, of always squinting at the heads of the government. It loses the capacity of looking freely around and in front of it ; it forgets the way to apprehend dangers approaching it from side directions. Those men who labour for the common weal or pretend to labour for it, notice neither their neighbours nor the effect of their words and actions upon their neighbours, but have in the whole extent of their artificially confined horizon merely the images of some personality or group, upon whose lips and eyebrows they hang like marionettes. They pay absolutely no farther heed to the community, and their aim is not to be of use to it, or to please it, but to obtain from those in power some condescending shake of the hand or a smile.

I am well aware of what is wont to be said in favour of such a state of matters. It is likely to render the concentration of all the energy of a people for great deeds easier, nay, to alone make such deeds possible on its part, to guard against that energy being dissipated in a hundred different directions, and to promote a uniform and definite guidance of the national destiny. In a country where the citizen-class is only valued when it has been made visibly distinct by the nation as a whole, which is represented by the government, a citizen feels himself impelled to dedicate his power to the nation at large and make himself well deserving of it ; selfishness is combated and public spirit intensified ; a closely-drawn joint responsibility connects all the members of the nation together, and that strict discipline, without which even the most powerful efforts of the masses are devoid of result,

becomes a fundamental trait in the character of the people. This is what people say, but it is a fallacy from the first word to the last. The energy of a collective body surely depends ultimately upon the energy of its separate constituent parts. If the latter should be feeble, then any amount of concentration, any amount of discipline and subordination to a uniform guidance, will not make them strong. A thousand sheep can be thoroughly trained to the most extreme joint responsibility, but they will never be able to oppose a single lion or even inspire him with fear. If in a nation manly independence is systematically crippled and rooted out, if character is shattered by a mighty oppression, then there will remain over at the last, not a living national organism, but only a little atomic dust through which a child might playfully run its fingers. Original natures fail to attain to development, multiplicity disappears, the sources of truth which were formerly wont to splutter for the people out of a thousand individual heads become dried up, and from one boundary of the country to the other there are now only met with office copies of one single figure which has been announced officially as the only real and proper national type.

In periods of peace a people may endure a deterioration of this kind for a long time, without becoming conscious of its risky situation and seeing the chasm along the verge of which it is moving. It may even have the good fortune to be governed by a powerful and enlightened mind that keeps lofty ideals before it and accomplishes great deeds. In that case everything proceeds tolerably well, the aspirants triumph, success seems to justify those who claim that the people shall allow a single head to think for it and a single arm to act for it, and the general wooing of the favour of the government which is solely obtainable by an unreserved return to the point of view of the limited submissive understanding, seems to tend to the welfare of the state. But even the man of genius does not live for ever, nor does every period produce a new one, and even the greatest people cannot be certain that it will always have extraordinary men at the head of its government. History teaches that in the councils of the mighty the "tiny degree of wisdom," of which Oxenstierna speaks, is far

more frequent than great mental energy. What then if the destiny of the people falls into the hands of mediocrity or even narrow-mindedness, frivolity, selfishness, self-interest, or low vice? The old habit of causing the government to think and act for it, and of honouring its opinions as infallible revelations, continues to survive, for it has become organic; the masses will continue to regard the councillor merely as a perfect man and a citizen of the first class, the men of culture in the nation will continue to bother themselves about titles and orders, and the government will continue only to allow those to participate in its favour who clap their applause. Any one, therefore, who aspires to respect among the masses will continue to fade away before the eyes of the high authorities in admiration and veneration, criticism will be silenced, the opposition of the few independent persons will be devoid of effect, and amid an idyl of self-satisfied government and admiring obedience the most frightful catastrophe may fall upon it overnight without warning. Then the results of this system of general minister-worship will become apparent. People will have forgotten the way to think of the common weal, and to search in their own understandings and feelings for what might be of advantage to it; people will have always thought merely of the government and confused this with the people, with the fatherland; people will have become accustomed to perform eye-service for a reward and recognition, instead of obtaining self-respect and self-satisfaction by living out their most intimate nature; the mischief will consequently find the entire people unprepared and defenceless, and the latter will finally perish, unless it chance to have still in its depths healthy and fresh elements which could traverse their own course of development, because they never troubled about titles and orders, and whose undestroyed strength in the hours of the most extreme peril will again make good all the faults of an imbecile government and a flattering *élite*.

A nation which surrounds the state hand-book with idolatrous veneration only gets what it deserves when the horse Incitatus is set over it as senator. It trains up its own oppressors and emasculators. This is how it happens that one falls asleep at Rossbach and awakes at Jena.

XV

NATIONALITY

WERE it not known how completely subjectivity rules our thought, and how much an erroneous conception which we may have elaborated for ourselves in regard to some phenomenon incapacitates our consciousness for a proper apprehension of this phenomenon, and for the noting of the differences between it and our internal image of it, in a word, were it not known how much more prevalent prejudice is than judgment, and how much more powerful fiction is than truth, it would be hard to understand how there can be men now-a-days who regard the question of nationality as one of the errors of the period and a matter of fashion, and in all seriousness designate it as a fraud, which it is true has seized many heads, but nevertheless will in a short while be forgotten. As a matter of fact, there exists a school of persons who have the boldness to call themselves statesmen and arrogate to themselves the direction of the destinies of peoples, and this school teaches that the question of nationality is simply one that was invented by Napoleon III. in order to stir up internal embarrassments in foreign states and train up abroad promoters and supporters of his restless policy of adventure. One single circumstance alone is able to prevent intelligent persons from pronouncing these would-be statesmen who speak in this way to be incurable blockheads, and that is the fact that they belong, without exception, to countries or races of people the arousing of whose national consciousness would be perilous, and that they therefore, by their desires and passions, by their anxiety for

the future, hatred of the ambitious races and rage at the threatened loss of usurped privileges, are obstructed in their observation and interpretation of the facts. They are to be met with in France, from which the title to occupy the chief position in Europe has been taken by the union between Germany and Italy; in Austria-Hungary, where subject peoples are demanding their rights as men; and in Belgium, where the Flemish are pertinaciously wresting their emancipation from the Walloons. Any one, whose intellect is not obscured by anxiety about domestic concerns, will recognize that the arousing of the national consciousness is a phenomenon that makes its appearance necessarily and naturally, both in the individual and in the mass of the people, at a particular stage of human development, and which can be as little retarded or even obstructed as can the tides of the ocean or the heat of the sun in midsummer time. Those persons, who assure the nations that they will soon again cease from laying stress upon their nationality, rest upon the same mental height as the child which says to its mother—"Just wait, when you come to be a little child, I will also carry you."

Upon what is the idea of nationality founded? What is its distinguishing characteristic? There has been much dispute about the matter and the question has been variously answered. Some lay stress upon the anthropological element, that is, the pedigree. That is so apparent an error that one feels an instinctive reluctance to refute it. I at all events do not believe in the oneness of the human species. My view is that the various chief races represent subordinate species of our race, and that their variations in respect of anatomical structure and complexion are not only phenomena of accommodation and results of the transformation of an originally uniform type by local influences, but find their explanation in a difference in respect of origin. It appears to me further, that between a white man and a negro, a Papuan and an Indian, there is no more affinity than between an African elephant and an Indian elephant, a domestic ox and a buffalo. But within one and the same race, and above all within the white race, the differences are certainly not important enough

to justify any abrupt separation or any sharply defined boundaries between the individual national types. In every white people there are big and little individuals, fair-haired and dark ones, some with blue eyes and some with black, and some with long skulls and some with short skulls ; some who are of a calm temperament and others who are of a lively temperament; and even though the one class predominates in this people and the other in that one, yet all their physical and mental characteristics are not of so much importance as to mark out an individual as a member of some particular people, and not of any other, so unequivocally as, for instance, his black skin, physiognomy, and head of hair mark out the negro as a member of a definite race. The attempts that are frequently made to find an average type for individual peoples are devoid of all scientific value ; their descriptions may read very nicely, and self-love may feel itself flattered by the pictures, but there is nothing in them except words. So far as the features of such a type are not arbitrarily invented, they merely consist of externalities which are not inborn in man, but acquired, and which he is able to lay aside even at a good old age, and which moreover he certainly also does not obtain when he is brought as a child into foreign surroundings and exposed to the influences of a strange people. Chamisso, who was already a half-grown youth before he was able to speak a word of German, became as much a German man and poet as any one else in whose veins the blood of Tacitus' old Germanic friends is claimed to flow. Michelet, not the French enthusiast, but the German philosopher, shows the mental characteristics of profoundness, moral earnestness, and even obscurity, which are proclaimed to be specifically German. The charming thinker, Julius Duboc, is distinguished by a real German idealism ; Du Bois Reymond is the model of a thorough German scholar ; and Fontane is in his views of Nature and his analysis of the soul not only German generally but actually North German ; and so on. Similar phenomena are to be met with in every other European people. Who will maintain that Ulbach and Müller (the author of the village tale *La Mionette*) are not pattern Frenchmen ? Who

will not find again in Hartzenbusch and Becker all the characteristics that are distinctive of Spanish poets? What is there un-English in Dante Gabriel Rossetti, if his name is left out of account? A man does not need to be connected with a people by a single drop of blood, and yet will assume its character with all its excellences and faults if only he is brought up and lives in its midst. Even though individual literary men or artists should appear to present a contradiction of this contention, we would still be bound to inquire whether they and we were not under the influence of two sources of error that are hard to be avoided. For it is clear that we easily fall into the tendency to seek, in the case of Chamisso, for instance, features which we arbitrarily ascribe to the French, and which we thereupon also find, since we know very well how quickly we transform phenomena into the shapes ascribed to them by our pre-conceived opinions. On the other hand, however, it is also very probable that a poet or artist of foreign extraction resident, say in England, will have the conception of the fatherland of his ancestors constantly in his head, and will imagine that he must have qualities which recall that land; under the influence of the suggestion which this thought exerts upon him, he will unconsciously alter his nature, assume all kinds of articial manners, and try to become like the picture which he forms in his mind of a man belonging to the land of his origin. The funniest part of the matter in such a case is, that instead of manifesting those qualities which really belong to the people in question, he exhibits those which English prejudice customarily and erroneously ascribes to it.

It is not then his extraction that gives a man his particular nationality. The descendants of the Huguenots who emigrated to the march of Brandenburg have become distinguished Germans, and those of the Dutch settlers in New Amsterdam blameless North-Americans. Wars, wholesale emigration, and the mutual intercourse of the individual nations have confused popular elements, that originally were perhaps plainly enough distinguished, one with the other, so as to be unrecognizable, and the legislation of all civilized states shows what little value it attaches to affinity by blood,

since it makes it possible for foreigners to become "naturalized," that is to say, to become full citizens of a state that was originally strange to them, with all the rights and duties possessed by the rest of the subjects of that state.

Since then an anthropological basis for the idea of nationality cannot be upheld, the effort has been made to give it an historical and legal basis. It has been said that what makes men adherents of one and the same nation is a common past, common history, the living together under the self-same government and the self-same laws, and the recollection of like sufferings and like joys. This theory admits of fine oratorical flourishes, but it is nevertheless purely sophistical in character and is kicked to one side contemptuously by all known facts. Just ask a Ruthenian of Galicia whether he feels himself to be a Pole, and yet the Ruthenians have for more than a thousand years, nay, as far back as we can peer into history, shared with the Poles the same history, laws, and political institutions. Or, inquire of a Finn or Suomi, as he will call himself, whether he thinks that he belongs to the same nationality as the Finnish Swede, along with whom he has likewise formed a single political people for some thousand years. No doubt, community of laws and institutions, but, in particular, habits of life, customs and usages, cause mutual approaches which are able to arouse a kind of feeling of kindred, just in the same way as, conversely, it is hardly to be doubted that the Jews, for example, are for this reason regarded as outsiders by the peoples among whom they live, chiefly because they cling with incomprehensible blindness and pertinacity to various external fashions, such as those connected with the computation of time, the observance of rest days and holidays, the rules as to eating, the choice of first names, etc., which are completely different from those of their Christian fellow-subjects, and through which a feeling of antithesis and separation must constantly be kept alive; but the aforesaid community is by no means sufficient to form out of different peoples one people, and to instil into the adherents of a state a feeling of nationality.

No, all this is cunning subtilty which the truth dissipates as if it were but a soap-bubble. His physical derivation is only extremely rarely worn by the human individual inscribed upon his brow. As a rule it is neither to be recognized nor to be indicated in him. He does not feel it himself, and in an elementary way all the talk that is made about the voice of the blood is simply a chimera invented by the authors of wretched suburban melodramas. Even laws and institutions, although their influence upon the formation of a man's character cannot be denied, do not determine his nationality. What does so determine a man's nationality is simply and solely language. It is by language alone that a person becomes an adherent of a people; it alone gives him his nationality. Just think of the importance of language for an individual, and the share it has in the formation of his nature, his thought, his feeling, his whole human individuality! It is by language that the individual assumes the manners of thought of the people that has formed and developed this language, and entrusted to and organically inserted into it the most secret emotions of its spirit and the finest details of its world of conception. It is by language that he becomes the adoptive child and heir of all the thinkers and poets, the teachers and leaders of the people; it is by language that he comes under the influence of that universal power of suggestion which is exercised by the literature and history of a people on all who compose it, and makes them to resemble one another in their feelings and actions. Language is in very truth man himself. It makes it possible for him to assume the most numerous and most important of the features in the phenomenon of the world, and it is the chief instrument by means of which he reacts upon the external world. Only one man among millions will think independently and elaborate his sense-impressions into original conceptions; the millions, however, will copy in their thoughts what has been thought out for them and what becomes accessible to them only through language. Only one man among millions can carry his conceptions into action and render them sensibly perceptible by influencing men and nature in a compulsory way; the millions, however, can give

expression to and make the processes within them perceptible by speech. Language, therefore, is by far the strongest tie by which, speaking generally, human beings can be bound together. Two children of the same parents, that were not masters of the self-same language, would be far more foreign one to the other than a couple of utter strangers who meet each other for the first time and exchange a greeting in the same mother tongue. We have of course seen and still see constantly before us instances like the following. The English and Northern Americans have waged wars with one another, and frequently enough had antagonistic interests; and yet as opposed to the non-Englishman they feel as if they were one, they feel as if they were all sons of Great Britain. So too the Flemish and the Dutch in 1831 fought desperately with one another, but now are of the mind to enter into a fresh bond of brotherhood. So too when the Boers fought with the English, the hearts of the Netherlanders throbbed with anxious excitement in spite of the fact that all political connection between Holland and the Cape had ceased nearly a century ago. So, again, the great differences in the matter of laws, customs, political adherence, and historical recollections between France, Switzerland, and Belgium did not prevent the Swiss and Belgians in 1870, in a wild passion and without justification, taking the part of the French. And although in Norway the inhabitants detested Danish rule for whole centuries, finally got rid of it, and even now-a-days don't bear any special good-will towards the Danes, nevertheless at the time of the Schleswig-Holstein war enthusiastic Norwegians were to be seen hastening to the assistance of the Danes, with whom they had nothing in common except their language. This nothing turns out in truth to be everything.

At a stage of national development, now left far behind us, language may have had a less degree of importance both for the individual and for the state. That was at a time when the bulk of the nation was without rights and obedient, and when only quite a small minority was in possession of the chief power. The individual who was born in the inferior ranks did not at that time, so to speak, need any language.

What purpose indeed would it have been able to serve for him? At most only this, namely, to groan or to curse in his hut, or to make coarse jests in his tap-house. With any other persons except his own village fellows, who without exception all spoke the same language, he never came in contact; to move into a foreign country or to see foreigners at home was not usual. Governing was done by means of the whip, the pithy laconic language of which was understood without the aid of grammar or dictionary; of schooling there was none; in regard to the administration of justice, the common man, who had his own little lawsuit, never got so far as to pour out his heart in animated speech before the judge in person, but had to make an attorney the interpreter of his grievance; the ruling powers would not condescend to any interchange of address and reply with their subjects; even in the church people were not allowed to argue why their mouthpieces had been developed, for Catholicism represented its God as some distinguished foreign lord who could only be addressed in the strange Latin tongue through the agency of priests skilled in languages. For the private individual there was neither the necessity nor even the possibility of advancing beyond the confined domain of inherited relations and working his way into a larger sphere by the assistance of speech. Where, however, on the other hand, as in the case of a municipal community, self-government prevailed, and the citizens had the opportunity of discussing and deciding their concerns, the question of language at once assumed a great degree of importance, and the citizen community, if it was composed of different philological families, divided itself up according to its tongues into nationalities which contended for the supremacy with very great bitterness. For the man of rank language had no importance for other reasons. His share in the government was guaranteed him by his birth, and he became lord and ruler without so much as opening his mouth or dipping his pen in the ink. (In England, where institutions are permeated with so many survivals of the Middle Ages, the case may even in our day still occur of a Dutchman, who happens to be the descendant of some Scotchman who had expatriated himself several generations ago, suddenly

becoming, owing to the dying out of the male line of his family which had been left behind in the country, an English peer and member of the House of Lords, and, therefore, a sharer in the legislative power of the British Empire, and that without being an English subject or being able to speak a word of English!) And in the few cases in which proclamations were necessary, the man of rank made use of the Latin language of which he either was himself master, or which at all events his spiritual secretary knew how to manipulate.

Under such circumstances, nationality was something subordinate, because even its chief distinguishing feature, language, was so. Beyond this stage, however, people have now-a-days everywhere attained, even in Russia and Turkey. The individual has become of full age and may, even when he belongs to the lowest classes, make an effort to get beyond the rank in which the accident of his birth has placed him. The administration of the law now takes place by word of mouth, and the governing powers have become humanly approachable and are answerable to the citizens; in the schools and in the army every adherent of the people is addressed and every one has to respond; Protestantism has taught the people to converse with their God in their own language, and to demand instruction and admonition from the pulpit in their own language. For every career in life the manipulation of speech has become necessary; even the most eminent individual, even the monarch, is unable to do without fluency of speech in numerous acts of importance, and all institutions both of the municipality and of the state necessitate the constant use of free speech. In this way language has gained a vast degree of importance, and the individual feels every limitation of his right to use his own language and every kind of compulsion to make him express himself in a foreign language to be an exercise of unbearable abuse of power.

What the question of nationality really signifies he has absolutely no conception who sits quietly in the midst of his fellows of the same race as a citizen of a municipality and of a state which are nationally speaking one, and who can

never get into the situation of having to be ashamed of his language or of having to deny it. Any amount of description or narration would be as unable to give a real notion of the rage and shame which a man feels in such a situation as it would of a bodily pain which has never been actually felt. Such a subject as this only he has any right to discuss who has been born in a country where his nationality is in the minority and suppressed, where his language is not the state language, and where he sees himself obliged to learn a foreign tongue of which nevertheless he will merely avail himself as a stranger, unless he should be willing to renounce for ever all higher kinds of activity for his individuality, all better careers and all exercise of his rights of citizenship in the municipality and state, like a slave of the Middle Ages or like a criminal convict of the present day. A man must have himself experienced the sensation, in order to know how it feels to be robbed in one's own state of one's original rights as a man, and to be obliged to bend one's head to the ground before a foreign nationality. What is the deprivation of one's rights as a man as compared with the renunciation of one's own language? What are fetters on the hands and feet as compared with the fettering of the tongue? A man would like to get out of himself, and he is shut up within himself. He knows that he could be eloquent and has to stutter lamentably in a foreign language. He sees himself robbed of his mightiest means for influencing others and feels himself paralyzed and crippled.

A man who is deserving of the name will never of his own accord find himself in such circumstances. Who would endure to renounce his own individuality without resistance? Who would be able voluntarily to enter upon a life from which the most important attribute of life has been taken, namely, the possibility of rendering sensibly perceptible the inward processes of life, the feelings and thoughts? I can understand the credulous Indian who throws himself under the car of Juggernaut and allows himself to be crushed to death; he does not believe that he is sacrificing his individuality, but on the contrary aims at a richer unfolding of his individuality in a future life. I can also understand the fakir

who of his own free will renounces the use of a limb and during all the remaining years of his life leads a sort of twilight existence as a half-man or human plant; he derives an incitation and recompense in the conceptions which he forms for himself of the good results of his pious renunciation for the salvation of his soul. I do not, however, understand those apostates who give up their nationality, who submit to the adoption of a foreign language and to torture it during the whole course of their life at the expense of the ridicule of others and their own everlasting shame. Those who offer up a sacrifice like this out of cowardice, weakness, or stupidity can arouse in any case only pity. Unspeakably repugnant, however, are those who throw away their language, that is to say, their own selves, the sensible manifestation of their thinking egos, and crawl into foreign skins that they may gain advantages. They rank lower than the dread Skoptzi, the Russian self-mutilators; for the latter at all events emasculate themselves out of regard for some religious conviction, whereas the former class of renegades allow themselves to be gelded into mental eunuchs for the sake of money and money's worth. There is no word that is able properly to designate such an unfathomable depravity of the mind.

To the honour of the human race be it said—these disgraceful apostates form everywhere merely a minority. The majority cling steadfastly to their language, and defend their nationality as if it were their life. The ruling race of people may promulgate laws which make their language the state language, and degrade that of the subject nationality to the level of the low gibberish of carters and menials which is excluded from school and church, from courts of justice and council-chambers. Should this language, however, be a developed one, should it actually be the prevailing language in some other country, possess a literature and serve somewhere or other in the world for the highest manifestations of humanity in the state and in science, then it will never submit to its being dishonoured. The oppressed nationality will then become the mortal enemy of its persecutor, it will furiously bite at the hand which tries to gag it, it will send forth urgent cries for help since it will not be allowed to speak, and it will

endeavour with desperate efforts to blow into the air a political construction which is not a refuge for it but an inhuman dungeon.

No amount of persuasion will induce a man of sound understanding to permit himself to be guillotined; that fact the French humorist has already established; and no amount of laws will be able to move a nationality, which has become developed to the extent of being conscious of itself, to a renunciation of its language and special nature. A state, therefore, which includes within itself several nationalities, is condemned to pitiless internal struggles from which there is no other deliverance except some radical process.

One radical form of deliverance would be the most thoroughgoing decentralization, and this is proposed by many politicians. At the present time, however, such a form of deliverance is only theoretically thinkable, not practically realizable. For just consider how far a process of decentralization has to go in order to satisfy all the nationalities in a state not constructed upon a basis of popular unity. It presupposes that every individual citizen, to whatever race he may happen to belong, may freely spend his life in accordance with all kinds of tendencies and in all possible spheres, and exercise all his rights as a man and as a citizen, without being obliged to make use of any other except his mother tongue. The consequence would be that not only the administration, from the village post-office up to the ministry, not only the machinery of the law, from the justice of the peace up to the supreme court of the realm, would have to discharge their duties in all the languages of the country, but even in the representative bodies of the municipality, the province and the state, all the languages of the country would have to be available; national, intermediate, and high schools would have to be instituted for each race, and it would have to be made possible for a man, after a literary education in his own mother tongue, to attain to all the political and academical honours and advantages which usually form the reward of this kind of activity; in short, it would be wrong for a citizen to be subjected to the necessity of learning a foreign language when he wishes to obtain something which can be acquired

by others of his countrymen without any such compulsion. These are, however, demands that cannot be fulfilled in practice. That sort of thing would mean the dissolving of a state into atoms which would no longer cohere together in any perceptible manner. So far-reaching an equalization of different races within the same state is perhaps possible in a place where only two nationalities of about the same strength live side by side, as is the case, for instance, in Belgium ; but it will never be possible in a state with ten or twelve nationalities, as is the case, for instance, in Austria-Hungary, not in a place where the races are dissimilar in number and degree of culture, and are not settled together in collective masses, but scattered at random among each other in a strange state of dissipation, where frequently a village includes three or four nationalities and languages, and a district even more than this. A state like this last cannot do without a state language, and by the employment of this the race whose tongue is the official and predominant one becomes the ruling race, the process of equalization is interrupted, all the other races are put at a disadvantage and reduced to a subordinate kind of existence, there come into being full citizens and half-citizens, there arise in the country inhabitants whose tongues the law sets free and others whom the self-same law condemns to be dumb; the tale of the seven ravens, according to which a maiden had to spend seven long years without uttering a word, becomes a political institution, and the inhabitants, who have been robbed of their simplest and at the same time highest human rights, find themselves in the unendurable circumstances that are above described.

There are enthusiastic politicians who seriously believe that civilized humanity will one day find itself in a condition in which great political organizations will no longer be rendered necessary. In such a state of matters there would be no more wars and no more foreign affairs; men would form large groups, extensive families, or moderately-sized communities, so to speak, within which the individual would enjoy every freedom of development, and all of whose members would accord one another that mental and physical support without which man in his conditions of existence cannot subsist;

every group would be independent of the others, and only when enterprises should happen to be under discussion which would be necessary and useful to several individuals at once, and which could not be carried out by one individual alone, would all those who might have an interest in the enterprise in question enter into an arrangement that would be temporary and simply made with a view to the particular purpose. If humanity were constituted in this sort of way there would at all events be no more questions about nationality, for the independent groups might be so small as to consist solely of fellow-speakers of the same language; but sooner than believe in this view of the future being one day realized, I would be much more ready to assume that men in the course of their organic development will sooner or later get so far as not to require any longer either language or, generally speaking, any symbolical form of movement, for the rendering of the states of their consciousness perceptible to the senses, and that instead of these processes the molecular movements of a brain will be communicated to other brains directly by a kind of radiation or continuous transmission. I ascribe to this mystic onward development the same degree of probability that I do to the visionary retrograde development of a national state into independent communities. In order not to hurt any one's feelings, I will call this degree of probability a very high one, but in return for so doing I expect this reasonable admission, namely, that before the one or the other of these given objects is attained, still a very long time must elapse, at all events a much longer time than the nationalities which at the present day are in subjection can or will wait. It would even be hard enough to get them to adopt a universal language. It may be that in a far-distant future the most highly cultured individuals of humanity as a whole will avail themselves of some common tongue in order to have intercourse with one another in an intellectual way. It is difficult to believe, however, that popular masses will ever become masters of this classical language of culture to such an extent as would admit of their being governed and administered with its assistance. In the case of their most important intellectual matters, when they initiate the young

into the mysteries of science, when they persuade their fellow-citizens to arrive at important decisions, or when they denounce the verdict of their consciences with regard to right and wrong—in such cases the prominent men among a people will never clothe their thoughts in a foreign language which must necessarily hamper their individuality and confine their freedom to move.

After laying aside all other radical solutions of the matter, there still remains only one, and that the most radical of all, namely, might. Nothing is to be accomplished by half-hearted intervention and lame attempts at adjustment. When we are dealing with so old an heirloom as language, with an essential part of the individuality itself, it is impossible to make any admissions, the harsh reply has to be given to every demand for renunciation—Nothing or all! The struggle for language is but another form of the struggle for life, and has to be waged in the same way; one either kills his enemy or is killed by him or takes refuge in flight. The struggle between nationalities is the winding-up of a process which began hundreds of years ago, and to some extent thousands of years ago, and has been, as it were, frozen up during all that time until now, when at last it is beginning to thaw and hasten to its conclusion. How did it then come about that different nationalities got mixed up together? One people forced itself by conquest into the settlement of another, but only supplanted the latter to a partial extent; there remained behind, in the midst of the conquerors, islands of the conquered people; or the victorious people were not very numerous, and merely spread themselves over the vanquished people like a thin surface stratum. In this last event the struggle has at the present day to be taken up at the point where it left off at the time of the conquest. The victorious people has to make a final effort, and either completely supplant the people invaded or kill them intellectually by depriving them with rough force of their language; though it may happen that the invaded people may rouse themselves to action and defend themselves against the invaders, and either thrust them back again out of their country or oblige them to renounce their nationality. Other states of matters may also be observed.

A part of a people which has failed to find sufficient nourishment and good fortune in its own country may have forsaken its native settlement and established itself in some other country. If this country was unoccupied then, but is now-a-days inhabited by other races of people who had emigrated there at a later time, then those who first took possession have now to consider the struggle for their language as an episode of the struggle against those natural obstacles which an overflowing surplus population has to meet with when it wishes to found colonies in new quarters of the globe; just as they have to protect themselves against swamps and streams, glaciers and chasms, fever and wandering animals, famine and cold, so will they have to defend themselves against human opponents, and they ought to consider the good fortune which they failed to find in their home-land, and sought for afar off, merely as the prize of a victory to be snatched at the risk of their lives over all these dead and living obstacles. On the other hand, if there were inhabitants at the time in the country which the emigrants made their new home, they would of course know under what conditions they claimed and received hospitality. If the surrender of their nationality was one of those conditions and they allowed themselves to be satisfied with it, then their weakness and cowardice deserve no sympathy, and their hosts have the right to demand from them, in return for the bread supplied to them, the renunciation of their language and individuality. Should they, however, have had the power and pertinacity to acquire a part of the foreign country without concessions of a dishonourable nature, then they would now also have the strength and will to do what they would then likewise have had to do had they been met in a hostile manner in the foreign country—namely, either to withdraw from it or to wrest a free portion of the country at the point of the sword, or to perish in an adventure for which they were not sufficiently able.

That is the way in which I regard this question of nationality. It is the fifth act of historical tragedies which began to be performed at the period of the dispersal of peoples as well as later, to some extent very much later. The intervals

between the acts have been of long duration, but they could not last for ever. The curtain has been raised, and the catastrophe is approaching. It will be cruel and hard, but hard and cruel are the destinies of all living beings, and existence is a struggle in which there is no mercy shown. What we have to do with here is not a question of right, but a question of might in the highest and most human sense of the term. There is no right which can oblige a living being to waive necessary conditions of existence. That is only to be accomplished by compulsion, and compulsion engenders opposition. No fanatic in regard to what is right has ever yet demanded of the lion that it should enter upon a suit for expropriation whenever it wanted to eat a sheep. Of course it would also be the right of the sheep to kill the lion if it were able. When we are dealing with a matter of life or balance of power, the notions of right and might coincide. This is so evident that even the written law of all countries reserves defence of his life for the individual as a matter of right, and therefore concedes that there are situations in which man has to seek for his right in his strength. And in what respect then is war anything else than a similar case of self-defence, though not of an individual but of a people? A people recognizes or imagines that it recognizes that there is something necessary for its life, or for the conveniences of its life, and it stretches out its hands for it. It has a right to do so, the same right, namely, that the lion has to the sheep. Should another people try to prevent it from obtaining this necessary thing, then it has to intervene in defence of its right with its might. The conquered people ought not to complain, it ought at most to try to renew the struggle. Should it ultimately be beaten, and should no prospect remain to it of its ever becoming the stronger, then it must just accept its fate as the last judgment of Nature, and say to itself—"I seem to have been born to be a sheep for ever, and must therefore adapt myself to the conditions of life that a sheep enjoys; it would undoubtedly be better if I were a lion; a lion, however, I certainly am not, and it is of no use and would be ridiculous for me to quarrel with Nature about the fact that she did not cause me to be born a lion."

A race of people whose language is being tried to be taken from it, is as it were in the position of having to defend its life. It has the right to contend for its most precious piece of property. If, however, it should not be strong enough to defend it, it has no cause for complaint. In the same way, a ruling people possesses the right to see that its freedom of speech should not be diminished by the presence of another race of people in the same country, and to refuse to make any kind of concessions to the latter which would limit its comforts. If, however, it is unable to follow up its right with might, it must just resign itself to recognizing the other race of people as equally entitled, it must meekly descend from its higher point of view as a dominant people, nay, it must even perish if its domination happens to be a condition of its existence. This scheme I apply with perfect impartiality to all struggling nationalities, to the Germans in Hungary and Bohemia equally with the Danes in North Schleswig and the Poles in Posen, and to the Roumanians in Siebenbürgen equally with the Italians in the Tyrol. The five millions of Magyars are quite right to try to change the eleven millions of non-Magyars in Hungary into Magyars; in doing so they are merely continuing the act of conquest which they initiated under Arpad in the year 884; but the Germans, Slavs, and Roumanians of Hungary are likewise quite right in defending themselves, and should they prove to be the stronger, should they conquer the disunited Magyars of Europe and wrest their unstable nationality from their bodies, the Magyars ought not to complain, but will just have to accept that fate as theirs to which they exposed themselves knowingly a thousand years ago, when they attacked a foreign land and risked their lives in the attempt to conquer pleasant places of settlement there. The Czechs are quite right in wishing to form an independent state and to tolerate no German element in the same; in doing so they are simply starting afresh the struggle on the Marchfeld and at the White Mountains; but the Germans are likewise quite right to oppose to their might a greater might, to fight a third decisive battle over and above those two historical ones, and ultimately to show the Czechs that they are not

possessed of sufficient power to appear as conquerors in the country, into which twelve centuries ago they managed to creep by stealth because no one opposed them.

Europe will not be able very much longer to escape a great and violent rending asunder of its nationalities. The different isolated portions of peoples will either once more join their most representative races or call in their assistance, and with their support overcome the lesser peoples in the midst of which they happen to be, and whose compulsion they now endure. The little peoples who share a country with others, and are unable to fall back upon any powerful relatives, are doomed to destruction. They cannot maintain their position in the struggle for existence against their stronger countrymen. As peoples they must perish. Only the great nations will endure, and such of the smaller ones as will be in a position to found an independent, national, political constitution, if necessary, by expelling or suppressing the foreign popular elements that are settled among them. The twentieth century can hardly come to an end without seeing the conclusion of this drama in the world's history. Before then a considerable portion of Europe will see much distress and bloodshed, many acts of violence and crimes; peoples will be raged against and races pitilessly crushed; side by side with tragedies of human baseness will be played tragedies of lofty heroism; hordes of cowards will allow themselves to be emasculated without resistance; and brave armies will perish gloriously in fight. The survivors, however, will then enjoy the full possession of their national rights, and in word and action will always and everywhere be able to be themselves.

The prospect that is here disclosed to us is a gloomy one, but it cannot terrify the man who has become reconciled to the severity of the universal law of life. Life means struggling, and the power to live gives the right to live. This law dominates the suns in space equally with the infusoria in stagnant water. It dominates peoples also, and gives to their destinies on this earth that direction from which they cannot be diverted by any hypocritical legislation or any tricky policy, any interests on the part of some

dynasty, or any sharpness on the part of mercenary renegades. Sentimentality may wipe its eyes at the sight of the destruction of a people. The intelligent man knows that it went down because it did not have the power to endure, and ranks it among those extinct forms of existence which prevailed at a past stage of the world's development.

XVI

A GLANCE INTO THE FUTURE

I HAVE ventured to draw a picture on the great black-board of the future, the picture of occurrences which I believe will take place. On the board there is a vast amount of empty space, and I cannot withstand the temptation to cover another little corner of it with imaginative drawings.

The next generations will, as I have laid down in my last chapter, see the violent solution of the question of nationality. The small and feeble peoples will disappear, that is to say, lose their distinctive languages and individualities, like the Vends in Lusatia and Mecklenburg, and like the Celts in Brittany, Wales, and Scotland. Kindred races will unite together and try to form a single great nation, as has already been done by the Lower and Upper Germans, the inhabitants of Provence and the Northern French, and as the Slavs, under Russian leadership, and the Scandinavians are beginning to do. Groups of mighty peoples that have emigrated will either perish, or with the support of the main power of their people fight their way up until they are lords of the districts in which they have settled, and join these on to their national state as component parts. The universal struggling and pressing, pushing and striking, will for a while produce a chaotic confusion among the different peoples, but out of this finally a few powerful formations will become crystallized. Then there will be left in Europe only four or five great nations, of which each will be complete mistress in its own house, will have thrust forth or absorbed all foreign and disturbing elements, and will know no inducement to

look out beyond its boundaries otherwise than as friendly disposed and for a neighbourly chat. Which particular nations will survive after the great struggle will be determined, not by the policies of cabinets, not by the genius of individual statesmen, and not at all by any omission or any achievement, any inferiority or any mental excellence of leading individuals, but by the inborn natural force of vitality that the peoples may possess and that may be visible in all possible forms, as physical vigour and as fertility, as superiority on the field of battle and as pre-eminence in culture, art, and science, as an unsurmountable feeling of cohesion, and as tenacity in adhering to nationality. I do not believe that it is the result of accident that a people is numerous or of limited numbers. The sum total of its individuals appears to me to be even in the animal kingdom one of the essential features, one of the distinctive characteristics of a race. If the Celts have almost disappeared from every part, if the Greeks have never been able to number more than a few millions, if the Magyars, Albanians, Basques, etc., have remained quite small peoples, it is simply because it was not in their nature to become great. At the time of Alfred the Great there were in all about two millions of English, and probably (though there are no historical records to decide the matter) about as many Scandinavians. At the present day England can count thirty-four millions of inhabitants, but the whole of the Scandinavian country combined only eight millions. The circumstances of the climate and soil cannot be the causes which have conduced to such dissimilar results in the way of increase; for Denmark and Southern Sweden and Norway are not essentially different from the greater part of England, and moreover the English have not confined themselves to their island, but have settled the greater part of the earth with the overflow of their popular energy. In the same way the explanation of the fact that France contained at the beginning of the present century twenty-two millions of inhabitants, and now can count thirty-eight millions, while the population of Germany has in the same period mounted from sixteen millions to forty-nine millions, is also not to be found in

circumstances connected with climate and soil. The French possessed the more favourable climate, the greater extent of territory, and the more fertile soil, and yet they have lagged so significantly behind the Germans. We have manifestly, therefore, to deal with an organic phenomenon, with a physical peculiarity, which is inherent in the people from the very first, can, it is true, be altered and deteriorated by the mixture of other blood and unfavourable conditions of existence, but under fairly natural conditions always again prevails and in the long run leads to the inevitable historical result, which cannot be prevented by any human power, that one people becomes spread over a wide extent of territory, becomes every century more numerous and powerful, and finally controls whole continents, while another people which originally was in no way behind the former gradually ceases to keep pace with its neighbour, shrinks more and more with every century, loses more and more in respect of extent and importance, and finally leads but the shadow of an existence or perishes in its entirety.

Thus we attain to a Europe which has found its internal equilibrium, and in which the few surviving peoples have obtained in respect of territory, power, and unity, all that they could generally speaking obtain by the highest exertion of all their organic energies. One European people will then show respect to another, and regard it as an unchangeable phenomenon of Nature which has to be reckoned with as if it were something established for all time. The boundaries of states will be looked upon as if they were something as immutable as the boundary between the solid land and the ocean, and a Russian will as little think of making a raid into German territory, or a German into Italian territory, as a bird would of living under the water, or a fish would of living in the air. Each people will labour in its own domain for the improvement of its conditions of existence, will do away one after the other with all obstacles which prevent the free and universal development of the individual, the highest realization of all his energies, and the most perfect welfare imaginable alike of individuals and of the whole, and will finally arrange, either by a gradual peaceful process of development or by

violent revolutions, such constitutions of state, society, and business life as appear to it or the great majority of its members to be the most suitable. Besides their intensive mental life the people will keep up merely one universal occupation—that, namely, of gaining from Nature their daily sustenance. The number of persons who might live on the proceeds of avocations which have not for their object the production of food materials will get smaller and smaller. A most extensive application of the forces of Nature and the invention of ingenious machines will make it possible to do without nine-tenths of the labourers who now-a-days are occupied in the manufactures. An organization of society on the basis of mutual responsibility will change entire communities into societies for the consumption of articles, and will suppress the smaller middlemen. All those who theretofore got through the world as shopkeepers and labourers will have to return to the fields and break the clods. All the while the nation will continue to progress and to increase in numbers, human beings will press closer together, the land which can be allotted to each individual will become smaller and smaller, and the struggle for existence more and more difficult. The methods of agriculture and breeding of cattle will be improved, deserts will be transformed into gardens, streams and inland waters into fish preserves, the country will yield returns such as had never previously been dreamed about, but finally a moment will come when with all the arts it will no longer be possible to force the soil to any farther increase of its yield, and the question of food supply will stalk like a ghost before the nation. Whence is nourishment to be got for those who are grown up, and whose lives are lengthened by a more perfectly developed science of health, or for the children who are annually born by hundreds of thousands and enjoy good appetites? Simply to run out beyond the boundaries or to overflow peacefully into neighbouring countries is no longer possible. For in all Europe practically the same conditions prevail, and the difficulties of one people are also those of another people. So also the application of force is excluded. No more wars of conquest can be waged in order to annihilate another nation or to expel it from its settlements and seize

these for oneself. Civilization has attained in all parts pretty much the same height, customs and institutions have become like one another, an easy and cheap and therefore lively intercourse has joined all peoples together by a thousand intimate relations, and it would be regarded as a crime to stretch out the hand after foreign property—and not merely as a crime, but also as a far too dangerous and therefore foolish undertaking. For all European peoples will be in possession of the same terribly perfect weapons, the same system of defence and training in the art of war, and if a bloody conflict were to be entered upon with a neighbouring people, to deprive it of its territory and soil, that would not imply the gaining of new places of abode for the surplus population, for which their own land had become too confined, but the despatching it to certain death because there was no longer any room for it at home. Moreover, there will also no longer be any international hatred, for struggles between nations are things of the past, and the full justification of the existence of each great people that survives is recognized by the other peoples, and the populations of the whole continent being equally cultured, and combining in uninterrupted intercourse of thought, have gradually become accustomed to consider all the peoples of Europe as fellows of a single family, and actually to look upon their own countrymen as brothers and the rest of the white race of humanity as cousins. Just as little as the inhabitants of the province of a national state even now-a-days think of attacking a neighbouring province, expelling the inhabitants and seizing their land for their own purposes, so will a people at this future time never think of practising an act of violence like that on any neighbouring European people.

What, however, must be done in order to solve the question of food supply? Here one of the laws of Nature comes into operation. The excess of the European population will flow out of the continent in the direction of least resistance. This least resistance is offered by the coloured races, and these, therefore, are of necessity doomed, first of all to be dislodged by the sons of the white race and then to be annihilated. The feeling of mutual responsibility, which is gradually being

embraced by all Europeans, will not extend to the non-Europeans. That uniformity of civilization which makes the peoples of Europe like to one another will not subsist between these and the inhabitants of the remaining continents. The application of force which in Europe will be prospectless will guarantee an easy success beyond its bounds. The European emigrant will not remove out of the temperate zone, which is the most beneficial and agreeable to him, farther than may be absolutely necessary. He will first of all settle the whole of North America and Australia, and the whole of Africa and America to the south of the torrid zone. Then he will take possesion of the southern coasts of the Mediterranean Sea and penetrate into the more hospitable portions of Asia. The natives will first of all try to organize resistance, but will soon see that their only salvation is in flight. They will retreat before the Europeans, and in their turn overwhelm the smaller and feebler landholders, treating them in the same way as they themselves have been treated by the stronger whites. Every generation, however, will produce in Europe a fresh superfluous swarm of human beings who will have to emigrate ; the new torrent will mount up beyond the high-water mark of the earlier stream, and the summits of European colonization will press farther and farther into foreign continents, always more and more approximating the equator. The inferior races will soon completely perish. I fail to see any hope of deliverance for them. Missionaries may supply them with ever so many Bibles and ever so much external Christianity, and theorists of philanthropy, who have never seen a negro or an Indian, except in pictures or in Hagenbeck's caravans, may wax into ever so much enthusiasm about the son of the wilderness and the romance of the Maoris and Caribs, yet the white race is better prepared for the struggle for existence than all the other races of men, and just as he requires the land of the savage to live upon will he take it without any hesitation. The black, red, or yellow specimens of humanity will then be nothing else than foes of the white race, who will make its existence difficult or impossible for it, and the latter will treat them just as it has treated the animal foes of its children, flocks, and fields, just

as it has treated the great feline animals of Africa and India, the bears, wolves, and buffaloes of the primeval European forests; it will extirpate them root and branch.

The first resting-place on our expedition into the future was the ultimate demarcation of the great national states that will survive the struggle for their languages and individualities, and the succeeding universal mental development and great increase of the peoples of Europe. The second resting-place is marked by the settlement of the whole earth by the sons of the white race after Europe first and then also the temperate zones of the other continents had become too confined, and the extirpation of the more inferior and feebler races. Many hundreds of years, probably thousands of years, will elapse before the pangs of hunger will have driven the white man to the upper portion of the Congo, to the banks of the Ganges and the Amazon, and before the last savage of the primitive forests of Brazil, New Guinea, and Ceylon will have disappeared before him, but ultimately this will certainly happen and the entire earth will be subject to the plough and locomotive of the sons of Europe.

Will a stationary period ensue at this point? Will the development of human destinies cease? No. The history of the world is a *perpetuum mobile*, and it runs on and on into the invisible. The white species of humanity, which has alone survived on the earth, will continue to progress, to flourish vigorously in the ancient settlements of its races on the European continent and in the temperate zones of the remaining portions of the globe; its peoples will increase, a new youth will constantly keep growing up and demand a place under the sun and a seat at the dinner-table; and after the lapse of several ages the necessity will again and again occur for a new generation to swarm away from the parent stock. But by this time there will not be any longer inferior races which can be dislodged and annihilated without difficulty, and without the lively feeling of having outraged a brother. Everywhere will be found repeated the same type of features and physique; everywhere kindred European languages, opinions, customs, and usages; everywhere the familiar forms of state and culture; and everywhere will some civilized white man have

inscribed his proprietary right to the soil with the sacred furrows of his plough. In what direction will emigrants have to turn? What is to happen with the excess of natives in the oldest civilized countries? One law will remain in full operation and help them out of their state of need, and that again the law of least resistance. There will no longer be inferior races, but the descendants of the white immigrants who have forced their way forward nearest to the equator will deteriorate organically in the tropical climate, and after a few generations represent a subordinate race of human beings, which will bear the same relation to their racial fellows in the more favourably situated countries that at present negroes or redskins do to the whites. That this sort of thing must take place does not admit of any doubt. The most manly and most warlike of the white peoples fall into decay in hot regions in the course of a few generations, and if they do not die completely out through infertility and disease, they at all events become so weakly and indolent, so stupid and cowardly, so incapable of resistance to all sorts of vices and injurious habits, that they soon cease to be much more than the shadows of their fathers and ancestors. This was within less than a hundred years the lot of those glorious Vandals, who attacked Carthage as Germanic giants and were able to be driven out as whining invalids by the miserable Byzantines. The same process is repeated even at the present day in all tropical countries which are made subject to the white races. The English Government troubles itself in vain to increase the number of marriages between their English soldiers and white women in India. The attempt has never succeeded, as Major-General Bagnold expresses it, "to raise enough male children to keep the regiments supplied with drummers and pipers." In French Guiana there have been concluded, according to a splendid work by Dr. J. Orgeas, between the years 1859 and 1882, four hundred and eighteen marriages between Europeans. Of these two hundred and fifteen have remained unfruitful, the remaining two hundred and three produced four hundred and three children. Twenty-four of these last were still-born, two hundred and thirty-eight died between April 1861 and January 1882 at various ages. One hundred and forty-one

children therefore represent in the course of twenty-three years the entire posterity of eight hundred and thirty-six married Europeans. And what an appearance this after-growth presents! They consist almost without exception of small-headed creatures, who were also stunted in their growth, with wrinkled skins and endowed with manifold defects.

The settlers between the tropics therefore are subject to deterioration; not only do they fail to develop any farther this civilization taken with them, they actually have to suffer for it, and soon retain of the inheritance of their race nothing more than a corrupted language and the vanity of their caste, of the physical and mental distinguishing characteristics of which nothing more remains. With these degenerate starvelings before them, the energetic immigrants experience no feelings of hesitation, and the feeble opposition which the former can make is not worth consideration. A fresh stratum of human beings, who require land and nourishment, becomes spread therefore over these lands so bathed in the solar glow, burying beneath it the older dried-up stratum and taking up the prospectless struggle against the climate anew. The equatorial regions will therefore perform in the future history of humanity the same work that they do in meteorology. Just as the cold waters of the poles flow towards the equator, evaporate there and then are sent back again in the form of vapours and clouds, just as by reason of this vaporization a lowering of the surface of the ocean takes place which has to be made up by new masses of water from the cold regions, just as, lastly, in this way the masses of water of all the oceans are kept in a constant state of movement, the circumstances connected with the rainfall over the whole earth regulated, and the most distant countries made fertile, so in the future will the excess of their native populations flow out of the older civilized countries to the tropics, there perish, evaporate as it were, and be in turn replaced by the constantly succeeding torrent. The equator will be a frightful cauldron in which human flesh will be liquefied and evaporated. It will be a renewal of the ancient worship of Moloch. The peoples of the temperate zones will throw one portion of their children into the throat of this fiery

furnace, and thereby make room for their own increase and their own development. The picture is a gruesome one, but the process itself is not. For it is not a painful death to which the children of these nations are doomed. There smiles at them pleasantly in the hot countries an exuberant style of living, genial are the breezes and billows that envelop their limbs, field and forest offer abundance of nourishment without having to be forced to produce it, more delightful and easier does the existence there appear to them to be than that of their brothers on the old perverse soil, and, with the sweet burning kisses to which they yield themselves with paroxysms of voluptuousness, the sun imbibes their life from every pore. It is a mode of dying that every effeminate nature will prefer to the rough struggle for existence ; it is a gentle passing away and dissolution, in which one will smack one's lips as in an opium dream and which can arouse envy rather than pity.

But the equator will not serve as a cauldon or retort for humanity for ever; it will not always be the safety-valve which opens as often as the pressure becomes too strong in the older civilized countries. The moment will come when circumstances will be completely reversed. The cooling of the earth will continue to go on, the belt of ice about the poles will slide lower and lower, and will tie fast one degree of latitude after another, and keep constantly suffocating new districts. Human beings will find their way to the tropics more eagerly than ever, but the torrid zone will by that time no longer be a malignant caressing strangler, but the nurse of the human race. She alone will continue to nourish her inhabitants with abundance, she alone will allow them to perfectly develop themselves, to joyfully increase and to remain smart and vigorous. All culture and civilization will be concentrated at the equator. Here will be erected palaces and academies, high schools and museums, and here will thoughts, researches, compositions, and creations be carried out. Here alone will human beings be able still to spend their lives in a perfect way. So much the worse for the sluggish, the comfortable, or the timid, who have tarried in the older countries. Even

though they should finally decide, under pressure of the onward forced wall of ice, to grasp their traveller's staves, they will find the pleasant settlements occupied and well guarded by a vigorous race that has become more flourishing and more powerful while they themselves have become feeble through cold and hunger. They will encamp like a pack of wolves on the borders of the magic circle, and will gaze with ravenous, covetous eyes over into the life of plenty, but as often as they should venture to burst in and capture booty they will be driven back into their icy deserts by the energetic lords of these lands of bliss.

And then? Yes, what will then be I do not know. Here a black future will become still blacker; I am utterly unable to distinguish anything more, and therefore am compelled to bring this tale to an end.

THE END

RICHARD CLAY & SONS, LIMITED,
BREAD STREET HILL, E.C., AND
BUNGAY, SUFFOLK.